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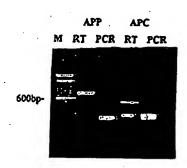
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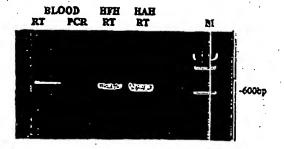
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# (54) Title: METHOD FOR THE DETECTION OF GENE TRANSCRIPTS IN BLOOD AND USES THEREOF

#### (57) Abstract

The present invention is directed to detection and measurement of gene transcripts in blood. Specifically provided is a RT-PCR analysis performed on a drop of blood for detecting, diagnosing and monitoring diseases using tissue-specific primers. The present invention also describes methods by which delineation of the sequence and/or quantitation of the expression levels of disease-associated genes allows for an immediate and accurate diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen.





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WO 00/40749

# METHOD FOR THE DETECTION OF GENE TRANSCRIPTS IN BLOOD AND USES THEREOF

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## BACKGROUND OF THE INVENTION

## Cross-Reference to Related Application

This application claims the benefit of priority of provisional patent application U.S. Serial Number 60/115,125, filed January 6, 1999 and of a U.S. application entitled "Method for the Detection of Gene Transcripts in Blood and uses Thereof" filed on January 4, 2000 (application number not yet assigned).

## Field of the Invention

The present invention relates generally to the molecular biology of human diseases. More specifically, the present invention relates to a process using the genetic information contained in human peripheral whole blood for the diagnosis, prognosis and monitoring of genetic and infectious disease in the human body.

## Description of the Related Art

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The blood is a vital part of the human circulatory system for the human body. Numerous cell types make up the blood tissue including monocytes, leukocytes, lymphocytes and erythrocytes. Although many blood cell types have been described, there are likely many as yet undiscovered cell types in the human blood. Some of these undiscovered cells may exist transiently, such as those derived from tissues and organs that are constantly interacting with the circulating blood in health and disease. Thus, the blood can provide an immediate picture of what is happening in the human body at any given time.

The turnover of cells in the hematopoietic system is enormous. It was reported that over one trillion cells, including 200 billion erythrocytes and 70 billion neutrophilic leukocytes, turn over each day in the human body (Ogawa 1993). As a consequence of continuous interactions between the blood and the body, genetic changes that occur within the cells or tissues of the body will trigger specific changes in gene expression within blood. It is the goal of the present invention that these genetic alterations be harnessed for diagnostic and prognostic purposes, which may lead to the development of therapeutics for ameliorating disease.

The complete profile of gene expression in the circulating blood remains totally unexplored. It is hypothesized that gene expression in the blood is reflective of body state and, as such, the resultant disruption of homeostasis under conditions of disease can be detected through analysis of transcripts differentially expressed in the blood alone. Thus, the identification of several key transcripts or genetic markers in blood will provide information about the genetic state of the cells, tissues, organs and systems of the human body in health and disease.

The prior art is deficient in non-invasive methods of screening for tissue-specific diseases. The present invention fulfills this long-standing need and desire in the art.

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## SUMMARY OF THE INVENTION

This present invention discloses a process of using the genetic information contained in human peripheral whole blood in the diagnosis, prognosis and monitoring of genetic and infectious disease in the human body. The process described herein requires a simple blood sample and is, therefore, non-invasive compared to conventional practices used to detect tissue specific disease, such as biopsies.

One object of the present invention is to provide a non-invasive method for the diagnosis, prognosis and monitoring of genetic and infectious disease in humans and animals.

In one embodiment of the present invention, there is provided a method for detecting expression of a gene in blood from a subject, comprising the steps of: a) quantifying RNA from a subject blood sample; and b) detecting expression of the gene in the quantified RNA, wherein the expression of the gene in quantified RNA indicates the expression of the gene in the subject blood.

In another embodiment of the present invention, there is provided a method for detecting expression of one or more genes in blood from a subject, comprising the steps of: a) obtaining a subject blood sample; b) extracting RNA from the blood sample; c) amplifying the RNA; d) generating expressed sequence tags (ESTs) from the amplified RNA product; and e) detecting expression of the genes in the ESTs, wherein the expression of the genes in the ESTs indicates the expression of the genes in the subject blood. Preferably, the genes are tissue-specific genes.

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In still another embodiment of the present invention, there is provided a method for detecting expression of one or more genes in blood from a subject, comprising the steps of: a) obtaining a subject blood sample; b) extracting DNA fragments from the blood sample; c) amplifying the DNA fragments; and d) detecting expression of the genes in the amplified DNA product, wherein the expression of the genes in the subject blood.

In yet another embodiment of the present invention, there is provided a method for monitoring a course of a therapeutic treatment in an individual, comprising the steps of: a) obtaining a blood sample from the individual; b) extracting RNA from the blood sample; c) amplifying the RNA; d) generating expressed sequence tags (ESTs) from the amplified RNA product; e) detecting expression of genes in the ESTs, wherein the expression of the genes is associated with the effect of

the therapeutic treatment: and f) repeating steps a)-e), wherein the course of the therapeutic treatment is monitored by detecting the change of expression of the genes in the ESTs. Such a method may also be used for monitoring the onset of overt symptoms of a disease, wherein the expression of the genes is associated with the onset of the symptoms.

In still yet another embodiment of the present invention, there is provided a method for diagnosing a disease in a test subject, comprising the steps of:

a) generating a cDNA library for the disease from a whole blood sample from a normal subject; b) generating expressed sequence tag (EST) profile from the normal subject cDNA library; c) generating a cDNA library for the disease from a whole blood sample from a test subject; d) generating EST profile from the test subject cDNA library; and e) comparing the test subject EST profile to the normal subject EST profile, wherein if the test subject EST profile differs from the normal subject EST profile, the test subject might be diagnosed with the disease.

In still yet another embodiment of the present invention, there is provided a kit for diagnosing, prognosing or predicting a disease, comprising: a) gene-specific primers; wherein the primers are designed in such a way that their sequences contain the opposing ends of two adjacent exons for the specific gene with the intron sequence excluded; and b) a carrier, wherein the carrier immobilizes the primer(s). Such a kit may be applied to a test subject whole blood sample to diagnose, prognose or predict a disease.

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In yet another embodiment of the present invention, there is provided a kit for diagnosing, prognosing or predicting a disease, comprising: a) probes derived from a whole blood sample for a specific disease; and b) a carrier, wherein the carrier immobilizes the probes. Such a kit may be applied to a test subject whole blood sample to diagnose, prognose or predict a disease.

Furthermore, the present invention provides a cDNA library specific for a disease, wherein the cDNA library is generated from whole blood samples.

Other and further aspects, features, and advantages of the present invention will be apparent from the following description of the presently preferred embodiments of the invention. These embodiments are given for the purpose of disclosure.

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#### BRIEF DESCRIPTION OF THE DRAWINGS

So that the matter in which the above-recited features, advantages and objects of the invention, as well as others which will become clear, are attained and can be understood in detail, more particular descriptions of the invention briefly summarized above may be had by reference to certain embodiments thereof which are illustrated in the appended drawings. These drawings form a part of the specification. It is to be noted, however, that the appended drawings illustrate preferred embodiments of the invention and therefore are not to be considered limiting in their scope not be considered to limit the scope of the invention.

Figure 1 shows the following RNA samples prepared from human blood; Figure 1A: Lane 1, Molecular weight marker; Lane 2, RT-PCR on APP gene; Lane 3, PCR on APP gene; Lane 4, RT-PCR on APC gene; Lane 5, PCR on APC gene; Figure 1B: Lanes 1 and 2, RT-PCR and PCR of βMyHC, respectively; Lanes 3 and 4, RT-PCR of βMyHC from RNA prepared from human fetal and human adult heart, respectively; Lane 5, Molecular weight marker.

Figure 2 shows quantitative RT-PCR analysis performed on RNA samples extracted from a drop of blood. Forward primer (5'-GCCCTCTGGGGACCTGAC-3', SEQ ID No. 1) of exon 1 and reverse primer (5'-CCCACCTGCAGGTCCTCT-3", SEQ ID No. 2) of exons 1 and 2 of insulin gene. Blood samples of 4 normal subjects were assayed. Lanes 1, 3, 5 and 7 represent overnight "fasting" blood sample and lanes 2, 4, 6 and 8 represent "non-fasting" samples.

Figure 3 shows quantitative RT-PCR analysis performed on RNA samples extracted from a drop of blood. Lanes 1 and 2 represent normal healthy person and lane 3 represents late-onset diabetes (Type II) and lane 4 represents asymptomatic diabetes.

Figure 4 shows multiple RT-PCR assay in a drop of blood. Primers were derived from insulin gene (INS), zinc-finger protein gene (ZFP) and house-keeping gene (GADH). Lane 1 represents normal person. Lane 2 represents 'late-onset diabetes and lane 3 represents asymptomatic diabetes.

Figure 5 shows standardized levels of insulin gene (Figure 5A) and ZFP gene (Figure 5B) expressed in a drop of blood. The first three subjects were normal, second two subjects showed normal glucose tolerance, and the last subject had late onset diabetes type II. Figure 5C shows standardized levels of insulin gene expressed in each fractionated cell from whole blood.

Figure 6 shows the differential screening of human blood cell cDNA library with different cDNA probes of heart and brain tissue. Figure 6A shows blood cell cDNA probes vs. adult heart cDNA probes. Figure 6B shows blood cell cDNA probes vs. human brain cDNA probes.

Figure 7 graphically shows the 1,800 unique genes in human blood and in the human fetal heart grouped into seven cellular functions.

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## DETAILED DESCRIPTION OF THE INVENTION

In accordance with the present invention, there may be employed conventional molecular biology, microbiology, and recombinant DNA techniques within the skill of the art. Such techniques are explained fully in the literature. See, e.g., Sambrook, Fritsch & Maniatis, "Molecular Cloning: A Laboratory Manual (1982); "DNA Cloning: A Practical Approach," Volumes I and II (D.N. Glover ed. 1985); "Oligonucleotide Synthesis" (M.J. Gait ed. 1984); "Nucleic Acid

Hybridization" [B.D. Hames & S.J. Higgins eds. (1985)]; "Transcription and Translation" [B.D. Hames & S.J. Higgins eds. (1984)]; "Animal Cell Culture" [R.I. Freshney, ed. (1986)]; "Immobilized Cells And Enzymes" [IRL Press, (1986)]; B. Perbal, "A Practical Guide To Molecular Cloning" (1984). Therefore, if appearing herein, the following terms shall have the definitions set out below.

A "cDNA" is defined as copy-DNA or complementary-DNA, and is a product of a reverse transcription reaction from an mRNA transcript. "RT-PCR" refers to reverse transcription polymerase chain reaction and results in production of cDNAs that are complementary to the mRNA template(s).

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The term "oligonucleotide" is defined as a molecule comprised of two or more deoxyribonucleotides, preferably more than three. Its exact size will depend upon many factors which, in turn, depend upon the ultimate function and use of the oligonucleotide. The term "primer" as used herein refers to an oligonucleotide, whether occurring naturally as in a purified restriction digest or produced synthetically, which is capable of acting as a point of initiation of synthesis when placed under conditions in which synthesis of a primer extension product, which is complementary to a nucleic acid strand, is induced, i.e., in the presence of nucleotides and an inducing agent such as a DNA polymerase and at a suitable temperature and pH. The primer may be either single-stranded or double-stranded and must be sufficiently long to prime the synthesis of the desired extension product in the presence of the inducing agent. The exact length of the primer will depend upon many factors, including temperature, source of primer and the method used. For example, for diagnostic applications, depending on the complexity of the target sequence, the oligonucleotide primer typically contains 15-25 or more nucleotides, although it may contain fewer nucleotides. The factors involved in determining the appropriate length of primer are readily known to one of ordinary skill in the art.

As used herein, random sequence primers refer to a composition of primers of random sequence, i.e. not directed towards a specific sequence. These

sequences possess sufficient complementary to hybridize with a polynucleotide and the primer sequence need not reflect the exact sequence of the template.

"Restriction fragment length polymorphism" refers to variations in DNA sequence detected by variations in the length of DNA fragments generated by restriction endonuclease digestion.

A standard Northern blot assay can be used to ascertain the relative amounts of mRNA fin a cell or tissue obtained from plant or other tissue, in accordance with conventional Northern hybridization techniques known to those persons of ordinary skill in the art. The Northern blot uses a hybridization probe, e.g. radiolabelled cDNA, either containing the full-length, single stranded DNA or a fragment of that DNA sequence at least 20 (preferably at least 30, more preferably at least 50, and most preferably at least 100 consecutive nucleotides in length). The DNA hybridization probe can be labelled by any of the many different methods known to those skilled in this art. The labels most commonly employed for these studies are radioactive elements, enzymes, chemicals which fluoresce when exposed to untraviolet light, and others. A number of fluorescent materials are known and can be utilized as labels. These include, for example, fluorescein, rhodamine, auramine, Texas Red, AMCA blue and Lucifer Yellow. A particular detecting material is antirabbit antibody prepared in goats and conjugated with fluorescein through an isothiocyanate. Proteins can also be labeled with a radioactive element or with an enzyme. The radioactive label can be detected by any of the currently available counting procedures. The preferred isotope may be selected from <sup>3</sup>H, <sup>14</sup>C, <sup>32</sup>P, <sup>35</sup>S, <sup>36</sup>Cl, <sup>51</sup>Cr, <sup>57</sup>Co, <sup>58</sup>Co, <sup>59</sup>Fe, <sup>90</sup>Y, <sup>125</sup>I, <sup>131</sup>I, and <sup>186</sup>Re. Enzyme labels are likewise useful, and can be detected by any of the presently utilized colorimetric, spectrophotometric, fluorospectrophotometric, amperometric gasometric techniques. The enzyme is conjugated to the selected particle by reaction with bridging molecules such as carbodiimides, diisocyanates, glutaraldehyde and the like. Many enzymes which can be used in these procedures are known and can be utilized.

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The preferred are peroxidase,  $\beta$ -glucuronidase,  $\beta$ -D-glucosidase,  $\beta$ -D-galactosidase, urease, glucose oxidase plus peroxidase and alkaline phosphatase. U.S. Patent Nos. 3,654,090, 3,850,752, and 4,016,043 are referred to by way of example for their disclosure of alternate labeling material and methods.

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As used herein, "individual" refers to human subjects as well as non-human subjects. The examples herein are not meant to limit the methodology of the present invention to human subjects only, as the instant methodology is useful in the fields of veterinary medicine, animal sciences and such.

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In one embodiment of the present invention, there is provided a method for detecting expression of a gene in blood from a subject, comprising the steps of: a) quantifying RNA from a subject blood sample; and b) detecting expression of the gene in the quantified RNA, wherein the expression of the gene in quantified RNA indicates the expression of the gene in the subject blood. An example of the quantifying method is by mass spectrometry.

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In another embodiment of the present invention, there is provided a method for detecting expression of one or more genes in blood from a subject, comprising the steps of: a) obtaining a subject blood sample; b) extracting RNA from the blood sample; c) amplifying the RNA; d) generating expressed sequence tags (ESTs) from the amplified RNA product; and e) detecting expression of the genes in the ESTs, wherein the expression of the genes in the ESTs indicates the expression of the genes in the subject blood. Preferably, the subject is a fetus, an embryo, a child, an adult or a non-human animal. The genes are non-cancer-associated and tissue-specific genes. Still preferably, the amplification is performed by RT-PCR using random sequence primers or gene-specific primers.

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In still another embodiment of the present invention, there is provided a method for detecting expression of one or more genes in blood from a subject, comprising the steps of: a) obtaining a subject blood sample; b) extracting DNA fragments from the blood sample; c) amplifying the DNA fragments; and d) detecting

expression of the genes in the amplified DNA product, wherein the expression of the genes in the amplified DNA product indicates the expression of the genes in the subject blood.

In yet another embodiment of the present invention, there is provided a method for monitoring a course of a therapeutic treatment in an individual, comprising the steps of: a) obtaining a blood sample from the individual; b) extracting RNA from the blood sample; c) amplifying the RNA; d) generating expressed sequence tags (ESTs) from the amplified RNA product; e) detecting expression of genes in the ESTs, wherein the expression of the genes is associated with the effect of the therapeutic treatment; and f) repeating steps a)-e), wherein the course of the therapeutic treatment is monitored by detecting the change of expression of the genes in the ESTs. Such a method may also be used for monitoring the onset of overt symptoms of a disease, wherein the expression of the genes is associated with the onset of the symptoms. Preferably, the amplification is performed by RT-PCR, and the change of the expression of the genes in the ESTs is monitored by sequencing the ESTs and comparing the resulting sequences at various time points; or by performing single nucleotide polymorphism analysis and detecting the variation of a single nucleotide in the ESTs at various time points.

In still yet another embodiment of the present invention, there is provided a method for diagnosing a disease in a test subject, comprising the steps of:

a) generating a cDNA library for the disease from a whole blood sample from a normal subject; b) generating expressed sequence tag (EST) profile from the normal subject cDNA library; c) generating a cDNA library for the disease from a whole blood sample from a test subject; d) generating EST profile from the test subject cDNA library; and e) comparing the test subject EST profile to the normal subject EST profile, wherein if the test subject EST profile differs from the normal subject EST profile, the test subject might be diagnosed with the disease.

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In still yet another embodiment of the present invention, there is provided a kit for diagnosing, prognosing or predicting a disease, comprising: a) genespecific primers; wherein the primers are designed in such a way that their sequences contain the opposing ends of two adjacent exons for the specific gene with the intron sequence excluded; and b) a carrier, wherein the carrier immobilizes the primer(s). Preferably, the gene-specific primers are selected from the group consisting of insulinspecific primers, atrial narruretic factor-specific primers, zinc finger protein genespecific primers, beta-myosin heavy chain gene-specific primers, amyloid precurser protein gene-specific primers, and adenomatous polyposis-coli protein gene-specific primers. Further preferably, the gene-specific primers are selected from the group consisting of SEQ ID Nos. 1 and 2; and SEQ ID Nos. 5 and 6. Such a kit may be applied to a test subject whole blood sample to diagnose, prognose or predict a disease by detecting the quantitative expression levels of specific genes associated with the disease in the test subject and then comparing to the levels of same genes expressed in a normal subject. Such a kit may also be used for monitoring a course of therapeutic treatment or monitoring the onset of overt symptoms of a disease.

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In yet another embodiment of the present invention, there is provided a kit for diagnosing, prognosing or predicting a disease, comprising: a) probes derived from a whole blood sample for a specific disease; and b) a carrier, wherein the carrier immobilizes the probes. Such a kit may be applied to a test subject whole blood sample to diagnose, prognose or predict a disease by detecting the quantitative expression levels of specific genes associated with the disease in the test subject and then comparing to the levels of same genes expressed in a normal subject. Such a kit may also be used for monitoring a course of therapeutic treatment or monitoring the onset of overt symptoms of a disease.

Furthermore, the present invention provides a cDNA library specific for a disease, wherein the cDNA library is generated from whole blood samples.

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The following examples are given for the purpose of illustrating various embodiments of the invention and are not meant to limit the present invention in any fashion.

## **EXAMPLE 1**

## Construction of a cDNA library

RNA extracted from human tissues (including fetal heart, adult heart, liver, brain, prostate gland and whole blood) were used to construct unidirectional cDNA libraries. The first mammalian heart cDNA library was constructed as early as 1982. Since then, the methodology has been revised and optimal conditions have been developed for construction of human heart and hematopoietic progenitor cDNA libraries (Liew et al., 1984; Liew 1993, Claudio et al., 1998). Most of the novel genes which were identified by sequence annotation can now be obtained as full length transcripts.

## **EXAMPLE 2**

## Catalogue of blood cell ESTs

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Random partial sequencing of expressed sequence tags (ESTs) of cDNA clones from the blood cell library was carried out to establish an EST database of blood. The known genes as derived from the ESTs were categorized into seven major cellular functions (Hwang, Dempsey et al., 1997).

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## EXAMPLE 3

## Differential screening of cDNA library

cDNA probes generated from transcripts of each tissue were used to hybridize the blood cell cDNA clones (Liew et al., 1997). The "positive" signals which were hybridized with P-labelled cDNA probes were defined as genes which shared identity with blood and respective tissues. The "negative" spots which were not exposed to P-labelled cDNA probes were considered to be blood-cell-enriched or low frequency transcripts.

## **EXAMPLE 4**

# Reverse transcriptase-polymerase chain reaction (RT-PCR) assay

RNA extracted from samples of human tissue was used for RT-PCR analysis (Jin et al. 1990). Three pairs of forward and reverse primers were designed for human cardiac beta-myosin heavy chain gene (βMyHC), amyloid precurser protein (APP) gene and adenomatous polyposis-coli protein (APC) gene. The PCR products were also subjected to automated DNA sequencing to verify the sequences as derived from the specific transcripts of blood.

## **EXAMPLE 5**

# Detection of tissue specific gene expression in human blood using RT-PCR

The beta-myosin heavy chain gene (βMyHC) transcript (mRNA) is known to be highly expressed in ventricles of the human heart. This sarcomeric protein is important for heart muscle contraction and its presence would not be expected in other non-muscle tissues and blood. In 1990, the gene for human cardiac

βMyHC was completely sequenced (Liew et al. 1990) and was comprised of 4 exons and 42 introns.

The method of reverse transcription polymerase chain reaction (RT-PCR) was used to determine whether this cardiac specific mRNA is also present in human blood. A pair of primers was designed; the forward primer (SEQ ID No. 3) was on the boundary of exons 21 and 22, and the reverse primer (SEQ ID No. 4) was on the boundary of exons 24 and 25. This region of mRNA is only present in βMyHC and is not found in the alpha-myosin heavy chain gene (αMyHC).

A blood sample was first treated with lysing buffer and then undergone centrifuge. The resulting pellets were further processed with RT-PCR. RT-PCR was performed using the total blood cell RNA as a template. A nested PCR product was generated and used for sequencing. The sequencing results were subjected to BLAST and the identity of exons 21 to 25 was confirmed to be from βMyHC (Figure 1A).

Using the same method just described, two other tissue specific genes - amyloid precursor protein (APP, forward primer, SEQ ID No. 7; reverse primer, SEQ ID No. 8) found in the brain and associated with Alzheimer's disease, and adenomatous polyposis coli protein (APC) found in the colon and rectum and associated with colorectal cancer (Groden *et al.* 1991; Santoro and Groden 1997) - were also detected in the RNA extracted from human blood (Figure 1B).

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## **EXAMPLE 6**

## Multiple RT-PCR analysis on a drop of blood from a normal/diseased individual

A drop of blood was extracted to obtain RNA to carry out quantitative RT-PCR analysis. Specific primers for the insulin gene were designed: forward primer (5'-GCCCTCTGGGGACCTGAC-3', SEQ ID No. 1) of exon 1 and reverse primer (5'-CCCACCTGCAGGTCCTCT-3", SEQ ID No. 2) of exons 1 and 2 of insulin gene. Such reverse primer was obtained by deleting the intron between the

exons 1 and 2. Blood samples of 4 normal subjects were assayed. It was found that the insulin gene is expressed in the blood and the quantitative expression of the insulin gene in a drop of blood is influenced by fasting and non-fasting states of normal healthy subjects (Figure 2). This very low level of expression of the insulin gene reflects the phenotypic status of a person and strongly suggests that there is a physiological and pathological role for its expression, contrary to the basal or illegitimate theory of transcription suggested by Chelly *et al.* (1989) and Kimoto (1998).

Same quantitative RT-PCR analysis was performed using insulin specific primers on RNA samples extracted from a drop of blood from a normal healthy person, a person having late-onset diabetes (Type II) and a person having asymptomatic diabetes. It was found that the insulin gene is expressed differentially amongst subjects that are healthy, diagnosed as type II diabetic, and also in an asymptomatic preclinical patient (Figure 3).

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Similarly, specific primers for the atrial natriuretic factor (ANF) gene were designed (forward primer, SEQ ID No. 5; reverse primer, SEQ ID No. 6) and RT-PCR analysis was performed on a drop of blood. ANF is known to be highly expressed in heart tissue biopsies and in the plasma of heart failure patients. However, atrial natriuretic factor was observed to be expressed in the blood and the expression of the atrial natriuretic factor gene is significantly higher in the blood of patients with heart failure as compared to the blood of a normal control patient.

Specific primers for the zinc finger protein gene (ZFP, forward primer, SEQ ID No. 9; reverse primer, SEQ ID No. 10) were also designed and RT-PCR analysis was performed on a drop of blood. ZFP is known to be high in heart tissue biopsies of cardiac hypertrophy and heart failure patients. In the present study, the expression of ZFP was observed in the blood as well as differential expression levels of ZFP amongst the normal, diabetic and asymptomatic preclinical subjects (Figure 4); although neither of the non-normal subjects has been specifically diagnosed as

suffering from cardiac hypertrophy and/or heart failure, the higher expression levels of the ZFP gene in their blood may indicate that these subjects are headed in that general direction.

It was hypothesized that a housekeeping gene such as glyceraldehyde dehydrogenase (GADH) which is required and highly expressed in all cells would not be differentially expressed in the blood of normal vs. disease subjects. This hypothesis was confirmed by RT-PCR using GADH specific primers (Figure 4). Thus, GADH is useful as an internal control.

Standardized levels of insulin gene or ZFP gene expressed in a drop of blood were estimated using a housekeeping gene as an internal control relative to insulin or ZFP expressed (Figures 5A & 5B). The levels of insulin gene expressed in each fractionated cell from whole blood were also standardized and shown in Figure 5C.

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## **EXAMPLE 7**

## Human blood cell cDNA library

In order to further substantiate the present invention, differential screening of the human blood cell cDNA library was conducted. cDNA probes derived from human blood, adult heart or brain were respectively hybridized to the human blood cDNA library clones. As shown in Figure 7, more than 95% of the "positively" identified clones are identical between the blood and other tissue samples.

DNA sequencing of randomly selected clones from the human whole blood cell cDNA library was also performed. This allowed information regarding the cellular function of blood to be obtained concurrently with gene identification. More than 20,000 expressed sequence tags (ESTs) have been generated and characterized to date, 17.6% of which did not result in a statistically significant match to entries in the

GenBank databases and thus were designated as "Novel" ESTs. These results are summarized in Figure 7 together with the seven cellular functions related to percent distribution of known genes in blood and in the fetal heart.

From 20,000 ESTs, 1,800 have been identified as known genes which may not all appear in the hemapoietic system. For example, the insulin gene and the atrial natriuretic factor gene have not been detected in these 20,000 ESTs but their transcripts were detected in a drop of blood, strongly suggesting that all transcripts of the human genome can be detected by performing RT-PCR analysis on a drop of blood.

In addition, approximately 400 novel genes have been identified from the 20,000 ESTs characterized to date, and these will be subjected to full length sequencing and open reading frame alignment to reduce the actual number of novel ESTs prior to screening for disease markers.

Analysis of the approximately 6,283 ESTs which have known matches in the GenBank databases revealed that this dataset represents over 1,800 unique genes. These genes have been catalogued into seven cellular functions. Comparisons of this set of unique genes with ESTs derived from human brain, heart, lung and kidney demonstrated a greater than 50% overlap in expression (Table 1).

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TABLE 1

## Overlap of Genes Expressed in Blood \*

· ·	Tissues	ESTs**	Overlap in Blo	<u>od</u>
	brain	134,000	60%	
	heart	65,000	59%	
	lung	60,200	58%	
<del></del>	kidney 32	,300	54%	

\* Estimated from limited known genes of about 1,800 as derived from the database of 6,297 ESTs from human blood cell library.

\*\* Obtained from the National Centre of Biotechnology Information (NCBI), U.S.A.

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#### **EXAMPLE 8**

## **Blood cell ESTs**

The results from the differential screening clearly indicate that the transcripts expressed in the whole blood are reflective of genes expressed in all cells and tissues of the body. More than 95% of detectable spots were identical from two different tissues. The remaining 5% of spots may represent cell- or tissue-specific transcripts; however, results obtained from partial sequencing to generate ESTs of these clones revealed most of them not to be cell- or tissue-specific transcripts.

Therefore, the negative spots are postulated to be reflective of low abundance transcripts in the tissue from which the cDNA probes were derived.

An alternative approach that was employed to identify transcripts expressed at low levels is the large-scale generation of expressed sequence tags (ESTs). There is substantial evidence regarding the efficiency of this technology to detect previously characterized (known) and uncharacterized (unknown or novel) genes expressed in the cardiovascular system (Hwang & Dempsey et al.. 1997). In the present invention, 20,000 ESTs have been produced from a human blood cell cDNA library and resulted in the identification of approximately 1,800 unique known genes (Table 2)

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In the most recent GenBank release, analysis of more than 300,000 ESTs in the database (dbESTs) generated more than 48,000 gene clusters which are thought to represent approximately 50% of the genes in the human genome. Only 4,800 of the dbESTs are blood-derived. In the present invention, 20,000 ESTs have

been obtained to date from a human blood cDNA library, which provides the world's most informative database with respect to blood cell transcripts. From the limited amount of information generated so far (i.e. 1,800 unique genes), it has already been determined that more than 50% of the transcripts are found in other cells or tissues of the human body (Table 2). Thus, it is expected that by increasing the number of ESTs generated, more genes will be identified that have an overlap in expression between the blood and other tissues. Furthermore, the transcripts for several genes which are known to have tissue-restricted patterns of expression (i.e. βMyHC, APP, APC, ANF, ZFP) have also been demonstrated to be present in blood.

Most recently, a cDNA library of human hematopoietic progenitor stem cells has also been constructed. From the limited set of 1,000 ESTs, there are at least 200 known genes that are shared with other tissue related genes (Claudio *et al.* 1998).

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Table 2 demonstrates the expression of known genes of specific tissues in blood cells. Previously, only the presence of "housekeeping" genes would have been expected. Additionally, the presence of at least 25 of the currently known 500 genes corresponding to molecular drug targets was detected. These molecular drug targets are used in the treatment of a variety of diseases which involve inflammation, renal and cardiovascular function, neoplastic disease, immunomodulation and viral infection (Drews & Ryser, 1997). It is expected that additional novel ESTs will represent future molecular drug targets.

# TABLE 2

# Comparison of 1,800 Unique Genes Identified in the Blood Cell cDNA Library to Genes Previously Identified in Specific Tissues

Gene Identification	No. of ESTs	Accession No.			Tiss	ue [	Distr	ibut	ion
	•		BI	1 Br	ГН	TK	TU	I Lu	<u>"                                    </u>
100 kDa coactivator	2	U22055		+	-	1	+	+	}
10kD protein (BC10)	2	AF053470		+	+	╁	+	+	<del></del>
14-3-3 epsilon	2	U54778		+	+	+	+-	+	<del></del>
14-3-3 protein	11	U28964		+	+	┼	+	ļ	
15 kDa selenoprotein (SEP15)	1	AF051894		+	+			+	
1-phosphatidylinositol-4- phosphate 5-kinase isoform C	,1	S78798	10	·	·			-	
23 kD highly basic protein	21.	X56932	+	+	.+	+	+	+	·
2-5A-dependent RNase	_ 1	L10381		<del> </del>	<del>                                     </del>	$\vdash$	<del>                                     </del>		
2'-5'oligoadenylate synthetase 2 (OAS2)	4	M87284	В			╁			
26S proteasome subunit 11	1	AF086708		<del>                                     </del>		1		<u> </u>	
36 kDa phosphothyrosine protein	2	AJ223280	. 1		+				
3-7 gene product (non- exact 86%aa)	1 .	D64159							•
3-phosphoglycerate dehydrogenase (PGAD)	1	AF006043	T	+	+			+	
3-prime-phosphoadenosine 5-prime-phosphosulfate synthase 1 (PAPSS1)	2	U53447	+	+	+	+		+	
46kd mannose 6- phosphate receptor (MPR46) (low match)	1	X56257							
5-aminoimidazole-4- carboxamide ribonucleotide transformylase	1 .	D89976	·						• ,
5'-nucleotidase	3	D38524	. 1	+			+		
6-phosphofructo-2- kinase/fructose-2,6- biphosphatase 4 (PFKFB4)	1	D49818		+				·	·
6-phosphofructo-2- kinase/fructose-2,6- bisphosphatase (PF2K)	1 .	AF041829	·						
71 kd heat shock cognate protein hsc70	23	Y00371							
76 kDa membrane protein (P76)	2	U81006		+	+	+	+	+	
8-oxoguanine DNA glycosylase (OGG1)	1	U96710	В				+	+	
a disintegrin and metalloprotease domain 10 (ADAM10)	1	AF009615	,				+		
a disintegrin and metalloprotease domain 8 (ADAM8)	1	D26579	В	+					
À kinasé anchor protein 95 (AKAP95)	2	Y11997	B, T activated		+			+	
A kinase anchor protein, 149kD (AKAP149)	2	X97335		+	+	+		+	

·								_	C1/CA00/00003
A4 differentiation-	1	U93305	·	Π.	Τ-	Т	<del>.</del>	T	<del></del>
dependent protein (A4), triple LIM domain protein				l	'			1 .	
(LMO6), and	1	ļ	•	1	1		1	1	<b>!</b> ·
synaptophysin (SYP);		1	Y			1		1	
calcium channel alpha-1		,				1	1	1	
subunit (CACNA1F)	1			-	1	1	1	1	
ABL and putative M8604	1	U07561	+	├	╁	┼─	┼-	+	
Met protein	1.			1	1	Ι.	1		
Absent in melanoma 1		U83115	+	+	<del> </del>	+-	+-	+	
(AIM1)		·		1		.	1		
accessory proteins	2	Z31696		+	+	1	1	1	
BAP31/BAP29 (DXS1357E)			1	1		1 .		1 .	
acetyl-Coenzyme A	ļ <u>,</u>						<u> </u>	1	
acyltransferase	2	X12966	+	+	+	+	+	+	
(peroxisomal 3-oxoacyl-		·		l	1.	ı		1.	
Coenzyme A thiolase)	].								
(ACAA)	1		·	Ι.	1	Ι.		1	1
acetyl-Coenzyme A	1	D88152	Tlymphoma	+	+	┰	-	╁	
transporter (ACATN)		·	, , , , , , , , , , , , ,				1 /		1 '
acidic 82 kDa protein	4	U15552					<del>                                     </del>	1	<del></del>
acidic protein rich in	1	Y07969	В	+	+	╁	+	+	<del> </del>
leucines (SSP29)	1	1	-	, i			'		
Aconitase 2, mitochondrial	1	U80040	+	+	+	+	+	++	
(ACO2)	<u> </u>		1			ľ	1		
actin binding protein	1	AF059569					1	1	
actin, beta (ACTB)	450						<u> </u>	l	
	158	X04098	Т, В	+	+		+	T	
actin, beta (ACTB) (non-	1 -	M10277				<del> </del>	$\vdash$	<del>                                     </del>	
exact, low match 73%)							1		
actin, gamma (low score)	1	K00791					1.		
actin, gamma 1 (ACTG1)	4	X04098	+	+	+	+	+	+	high in many libraries
actin-binding LIM protein	4	D31883	<del> </del>	+	+	+	├	+	
(ABLIM)				•	'	'	l	•	
Actinin, alpha 1 (ACTN1)	8	M95178		+	+	+	_	+	
actinin, alpha 4 (ACTN4)	1	D89980		+	+		+	<del></del>	· · · · · · · · · · · · · · · · · · ·
activated p21cdc42Hs	1-1-		<u> </u>			·	Ľ		
kinase (ACK)	<b>'</b>	L13738	В	+		l		+	
activated RNA polymerase	1	X79805	<del>                                     </del>	+	+ -	+	<u> </u>	+	· · · · · · · · · · · · · · · · · · ·
III transcription cofactor 4	,	X. 5005	i . i	٠ ا	•	•	l		·
I/DCA\			<b> </b>						
(PC4)	1	*					_	├─	
activating transcription	1	X55544	<del></del>		+				l
activating transcription factor 1 (ATF1)					+			ľ	
activating transcription factor 1 (ATF1) activating transcription	1	X55544 X15875		+	+		+		
activating transcription factor 1 (ATF1) activating transcription factor 2 (ATF2)	1	X15875		+			+		
activating transcription factor 1 (ATF1) activating transcription factor 2 (ATF2) activating transcription				+			+	+	
activating transcription factor 1 (ATF1) activating transcription factor 2 (ATF2) activating transcription factor 4 (tax-responsive	1	X15875		+				+	
activating transcription factor 1 (ATF1) activating transcription factor 2 (ATF2) activating transcription factor 4 (tax-responsive enhancer element 867)	1	X15875		+				+	
activating transcription factor 1 (ATF1) activating transcription factor 2 (ATF2) activating transcription factor 4 (tax-responsive	1	X15875 M86842		·	+				
activating transcription factor 1 (ATF1) activating transcription factor 2 (ATF2) activating transcription factor 4 (tax-responsive enhancer element B67) (ATF4) active BCR-related gene (ABR)	2	X15875	+	+		+		+	
activating transcription factor 1 (ATF1) activating transcription factor 2 (ATF2) activating transcription factor 4 (tax-responsive enhancer element B67) (ATF4) active BCR-related gene (ABR) acyl-CoA oxidase (AOX)	2	X15875 M86842	+	·	+	+			
activating transcription factor 1 (ATF1) activating transcription factor 2 (ATF2) activating transcription factor 4 (tax-responsive enhancer element B67) (ATF4) active BCR-related gene (ABR) acyl-CoA oxidase (AOX)	1 1 1	X15875 M86842 U01147 U03254	. *.	·	+	+			
activating transcription factor 1 (ATF1) activating transcription factor 2 (ATF2) activating transcription factor 4 (tax-responsive enhancer element B67) (ATF4) active BCR-related gene (ABR) acyl-CoA oxidase (AOX) acyl-Coenzyme A dehydrogenase, C-4 to C-	2	X15875 M86842 U01147	+	·	+	+			
activating transcription factor 1 (ATF1) activating transcription factor 2 (ATF2) activating transcription factor 4 (tax-responsive enhancer element B67) (ATF4) active BCR-related gene (ABR) acyl-CoA oxidase (AOX) acyl-Coenzyme A dehydrogenase, C-4 to C- 12 straight chain (ACADM)	1 1 1	X15875 M86842 U01147 U03254	+	·	+	+			
activating transcription factor 1 (ATF1) activating transcription factor 2 (ATF2) activating transcription factor 4 (tax-responsive enhancer element B67) (ATF4) active BCR-related gene (ABR) acyl-CoA oxidase (AOX) acyl-Coenzyme A dehydrogenase, C-4 to C-12 straight chain (ACADM) acyl-Coenzyme A	1 1 1	X15875 M86842 U01147 U03254	+	·	+	+			
activating transcription factor 1 (ATF1) activating transcription factor 2 (ATF2) activating transcription factor 4 (tax-responsive enhancer element B67) (ATF4) active BCR-related gene (ABR) acyl-CoA oxidase (AOX) acyl-Coenzyme A dehydrogenase, C-4 to C- 12 straight chain (ACADM) acyl-Coenzyme A dehydrogenase, very long	1 1 1 2	X15875 M86842 U01147 U03254 M16827		+	+		+	+	
activating transcription factor 1 (ATF1) activating transcription factor 2 (ATF2) activating transcription factor 4 (tax-responsive enhancer element B67) (ATF4) active BCR-related gene (ABR) acyl-CoA oxidase (AOX) acyl-Coenzyme A dehydrogenase, C-4 to C- 12 straight chain (ACADM) acyl-Coenzyme A dehydrogenase, very long chain (ACADVL)	1 1 2 3	X15875 M86842 U01147 U03254 M16827		+	+		+	+	
activating transcription factor 1 (ATF1) activating transcription factor 2 (ATF2) activating transcription factor 4 (tax-responsive enhancer element B67) (ATF4) active BCR-related gene (ABR) acyl-Coenzyme A dehydrogenase, C-4 to C- 12 straight chain (ACADM) acyl-Coenzyme A dehydrogenase, very long chain (ACADVL) acyloxyacyl hydrolase	1 1 1 2	X15875 M86842 U01147 U03254 M16827		+	+		+	+	
activating transcription factor 1 (ATF1) activating transcription factor 2 (ATF2) activating transcription factor 4 (tax-responsive enhancer element B67) (ATF4) active BCR-related gene (ABR) acyl-CoA oxidase (AOX) acyl-Coenzyme A dehydrogenase, C-4 to C- 12 straight chain (ACADM) acyl-Coenzyme A dehydrogenase, very long chain (ACADVL) acyloxyacyl hydrolase (neutrophil) (AOAH)	1 1 2 3 3 3	X15875 M86842 U01147 U03254 M16827 D43682 M62840	+	+	+ + + +		+ +	+	
activating transcription factor 1 (ATF1) activating transcription factor 2 (ATF2) activating transcription factor 4 (tax-responsive enhancer element B67) (ATF4) active BCR-related gene (ABR) acyl-CoA oxidase (AOX) acyl-Coenzyme A dehydrogenase, C-4 to C- 12 straight chain (ACADM) acyl-Coenzyme A dehydrogenase, very long chain (ACADVL) acyloxyacyl hydrolase (neutrophil) (AOAH) adaptin, delta (ADTD)	1 1 1 2 3 3 3 2 2	X15875 M86842 U01147 U03254 M16827 D43682 M62840 U91930	+	+	+		+	+	
activating transcription factor 1 (ATF1) activating transcription factor 2 (ATF2) activating transcription factor 4 (tax-responsive enhancer element B67) (ATF4) active BCR-related gene (ABR) acyl-CoA oxidase (AOX) acyl-Coenzyme A dehydrogenase, C-4 to C- 12 straight chain (ACADM) acyl-Coenzyme A dehydrogenase, very long chain (ACADVL) acyloxyacyl hydrolase (neutrophil) (AOAH) adaptin, delta (ADTD)	1 1 2 3 3 3	X15875 M86842 U01147 U03254 M16827 D43682 M62840	+	+	+ + + +		+ +	+	
activating transcription factor 1 (ATF1) activating transcription factor 2 (ATF2) activating transcription factor 4 (tax-responsive enhancer element B67) (ATF4) active BCR-related gene (ABR) acyl-CoA oxidase (AOX) acyl-Coenzyme A dehydrogenase, C-4 to C-12 straight chain (ACADM) acyl-Coenzyme A dehydrogenase, very long chain (ACADVL) acyl-Coenzyme A dehydrogenase, very long chain (ACADVL) acyl-Coenzyme A dehydrogenase, very long chain (ACADVL) adaptin, delta (ADTD) adaptin, delta (ADTD) (non-exact 59%)	1 1 1 2 3 3 3 2 1	X15875 M86842 U01147 U03254 M16827 D43682 M62840 U91930 AC005328	+	+	+ + + + + + + + + + + + + + + + + + + +	+	+ +	+ +	
activating transcription factor 1 (ATF1) activating transcription factor 2 (ATF2) activating transcription factor 4 (tax-responsive enhancer element B67) (ATF4) active BCR-related gene (ABR) acyl-CoA oxidase (AOX) acyl-Coenzyme A dehydrogenase, C-4 to C- 12 straight chain (ACADM) acyl-Coenzyme A dehydrogenase, very long chain (ACADVL) acyl-Coenzyme A dehydrogenase, very long chain (ACADVL) adaptin, delta (ADTD) adaptin, delta (ADTD) (non-exact 59%) adaptin, gamma (ADTG)	1 1 1 2 3 3 3 2 1 1 1	X15875 M86842 U01147 U03254 M16827 D43682 M62840 U91930 AC005328 Y12226	+	+	+ + + +		+ +	+	
activating transcription factor 1 (ATF1) activating transcription factor 2 (ATF2) activating transcription factor 4 (tax-responsive enhancer element B67) (ATF4) active BCR-related gene (ABR) acyl-CoA oxidase (AOX) acyl-Coenzyme A dehydrogenase, C-4 to C- 12 straight chain (ACADM) acyl-Coenzyme A dehydrogenase, very long chain (ACADVL) acyl-Coenzyme A dehydrogenase, very long chain (ACADVL) adaptin, delta (ADTD) adaptin, delta (ADTD) adaptin, gamma (ADTG) adaptor complex sigma3B	1 1 1 2 3 3 3 2 1	X15875 M86842 U01147 U03254 M16827 D43682 M62840 U91930 AC005328	+	+	+ + + + + + + + + + + + + + + + + + + +	+	+ +	+ +	
activating transcription factor 1 (ATF1) activating transcription factor 2 (ATF2) activating transcription factor 4 (tax-responsive enhancer element B67) (ATF4) active BCR-related gene (ABR) acyl-Coenzyme A dehydrogenase, C-4 to C- 12 straight chain (ACADM) acyl-Coenzyme A dehydrogenase, very long chain (ACADVL) acyloxyacyl hydrolase (neutrophil) (AOAH) adaptin, delta (ADTD) adaptin, delta (ADTD) (non-exact 59%) adaptor complex sigma3B (AP3S3)	1 1 2 3 3 3 2 1 1 2 2 1 2 1 2 1 2 1 2 1	X15875 M86842 U01147 U03254 M16827 D43682 M62840 U91930 AC005328 Y12226 X99459	+	+ + + + + + + + + + + + + + + + + + + +	+ + + + + + + + + + + + + + + + + + + +	+	+ +	+ + +	
activating transcription factor 1 (ATF1) activating transcription factor 2 (ATF2) activating transcription factor 4 (tax-responsive enhancer element B67) (ATF4) active BCR-related gene (ABR) acyl-Coenzyme A dehydrogenase, C-4 to C-12 straight chain (ACADM) acyl-Coenzyme A dehydrogenase, very long chain (ACADVL) acyloxyacyl hydrolase (neutrophil) (AOAH) adaptin, delta (ADTD) (non-exact 59%) adaptin, gamma (ADTG) adaptor complex sigma3B (AP3S3) adaptor protein p150	1 1 2 3 3 2 1 1 2 1 1 2 1 1 2 1 1 1 2 1 1 1 1	X15875 M86842 U01147 U03254 M16827 D43682 M62840 U91930 AC005328 Y12226 X99459 Y08991	+	+ + + + + + + + + + + + + + + + + + + +	+ + + + + + + + + + + + + + + + + + + +	+	+ +	+ + +	
activating transcription factor 1 (ATF1) activating transcription factor 2 (ATF2) activating transcription factor 4 (tax-responsive enhancer element B67) (ATF4) active BCR-related gene (ABR) acyl-Coenzyme A dehydrogenase, C-4 to C- 12 straight chain (ACADM) acyl-Coenzyme A dehydrogenase, very long chain (ACADVL) acyloxyacyl hydrolase (neutrophil) (AOAH) adaptin, delta (ADTD) adaptin, delta (ADTD) (non-exact 59%) adaptor complex sigma3B (AP3S3)	1 1 2 3 3 3 2 1 1 2 2 1 2 1 2 1 2 1 2 1	X15875 M86842 U01147 U03254 M16827 D43682 M62840 U91930 AC005328 Y12226 X99459	+	+ + + + + + + + + + + + + + + + + + + +	+ + + + + + + + + + + + + + + + + + + +	+	+ +	+ + +	

adducin 1 (alpha) (add1)			<u> </u>	<u>.                                    </u>					Ç17CA00/00003
	3	L29296	+	+	+	+	L.	+	
adducin 3 (gamma) (ADD3)		U37122	B, W	+	+		+	. +	
adenine nucleotide translocator 2 (fibroblast) (ANT2)	2	M57424		+	+	ŀ	+		
adenine nucleotide translocator 2 (fibroblast) (ANT2) (non-exact 81%)	.1	J02683							
adenine nucleotide translocator 2 (fibroblast) (ANT2) (non-exact, 79%)	1	J02683						·	
adenine nucleotide translocator 2 (fibroblast) (ANT2) (non-exact, 86%)	1	J02683					<u> </u>		
adenine nucleotide	3.	J03592	,	+	÷,		+	+	
(ANT3) adenosine deaminase, RNA-specific (ADAR)	6	U18121		+	+		+		
adenylate cyclase 3 (ADCY3)	2	AF033861		+	+	+	+	+	
adenylate cyclase 7 (ADCY7) adenylate kinase 2 (AK2)	1 2	D25538	·						
adenylate kinase 3 (AK3) (non-exact, 67%)	1	X60673		+	+		+	+	
adenylyl cyclase- associated protein (CAP)	28	M98474	T .		+		+		
adipose differentiation- related protein; adipophilin (ADFP)	1	X97324			+		+	+	
ADP-ribosylation factor 1 (ARF1)	13	M84326		+	+		+	+	
ADP-ribosylation factor 3 (ARF3) ADP-ribosylation factor 4	1	M33384		+	+	·	+		
(ARF4) ADP-nbosylation factor 5	· · · · · · · · · · · · · · · · · · ·	M36341	Tlymphoma	+	+	+		+	
(ARF5) ADP-ribosylation factor	_ <del>-</del> -	L04510		+		_	_	+	·
domain protein 1, 64kD (ARFD1) ADP-ribosyltransferase	4	1122701				·			
(NAD+; poly (ADP-ribose)	· ·	M32721	+	+	+	*	+	+	
adrenergic, beta, receptor kinase 1 (ADRBK1) adrenoleukodystrophy-like	2	X61157	В	+			+		
1 (ALDL1) AE-binding protein 1	<u> </u>	AJ000327 D86479						]	,
(AEBP1) (non-exact, 62%) AF-17	1	U07932		<u> </u>		_	_	_	
A-gamma-globin	<del>- 1</del> -	V00514					-		
A-gamma-globin (chromosome 11 allele)	1	J00176				$\dashv$	$\dashv$	$\dashv$	
agammaglobulinaemia	1	U78027				$\dashv$	$\dashv$	$\dashv$	
tyrosine kinase (ATK) AHNAK nucleoprotein (desmoyokin) (AHNAK)	4.	M80899	+	+	+	+	$\dashv$	+	
alanyi (membrane) aminopeptidase	1	X13276		$\dashv$	+	+	+	$\dashv$	
(aminopeptidase N, aminopeptidase M, microsomal aminopeptidase, CD13,			è						
p150) (ANPEP) alcohol dehydrogenase 5 (class III), chi polypeptide	1	M29872		_		+	$\dashv$	$\dashv$	
(ADH5)	1	AF003341		+	_	4	+	+	
1, soluble (ALDH1)									

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PCT/CA00/00005

aldehyde dehydrogenase 10 (fatty aldehyde dehydrogenase) (ALDH10)	2	U75286			*				
aldehyde reductase 1 (low Km aldose reductase) (ALDR1)	3	J04795	- B	+	+	+	+		*
aldo-keto reductase family 11, member A1 (aldehyde reductase) (AKR1A1)	2	J04794	В	+	+		+	·	
aldo-keto reductase family 1, member C3 (3-alpha	1	D17793		+	+	+		+	
hydroxysteroid dehydrogenase, type II) (AKR1C3)						٠.			**
aldo-keto reductase family 7, member A2 (aflatoxin aldehyde reductase) (AKR7A2)	1	Y16675		+	+		+	+	
aldolase Á, fructose- bisphosphate (ALDOA)	7	X12447		+	+		+		
aldolase C, fructose- bisphosphate (ALDOC)	2	X05196		+	+ .		+:		+
alkaline phosphatase, liver/bone/kidney (ALPL) ALL-1 (=L04731;L04284	4	4502062							-
HRX)	4	Z69780 D55649		+		<u> </u>			
isozyme alpha thalassemia/mental	3	U75653	+	+		+	+	+	
retardation syndrome X- linked (ATRX)			·	İ		Ť		٠.	
alpha-2 macroglobulin	1	Z11711							
alpha-2-globin	2	V00516	-	$\vdash$		<u> </u>		_	
alpha-2-macroglobulin	1	U06985	<del>                                     </del>	1	-	<u> </u>			·
receptor/lipoprotein receptor protein (A2MR/LRP)	,					٠.			,
alpha-polypeptide of N- acetyl-alpha- glucosaminidase (HEXA)	1	M13520							
alpha-spectrin	1	X86901		-		_		_	
alpha-subunit of Gi2 a (GTP-binding signal transduction protein)		X07854	·				٠		-
aminin receptor 1 (67kD); Ribosomal protein SA (LAMR1)	2 .	J03799	T	+	+		+	+	
aminolevulinate, delta-, dehydratase (ALAD)	1	X64467		+		-		-	
amino-terminal enhancer of split (AES)	2	X73358	+	+	+	+		+	, , , , , , , , , , , , , , , , , , ,
amino-terminal enhancer of split (AES)  AMP deaminase isoform L	8	U04241 M91029	В В	+			+		
(AMPD2) amphiphysin (Stiff-Mann	1	U07616	В	+				+	
syndrome with breast cancer 128kD autoantigen) (AMPH)	(1)	00/010					•	Ť	(#)
amphiphysin (Stiff-Mann syndrome with breast cancer 128kD autoantigen) (AMPH)(non-exact, 68%)	1	U07616							
amphiphysin (Stiff-Mann syndrome with breast cancer 128kD autoantigen) (AMPH)(non-exact, 68%)		U07616	·						
amphiphysin II	4	U87558		+	+		┯┥		
amphiphysin II (67%aa amphiphysin?)	1	AF068915				$\dashv$	┪	$\dashv$	_:
amphiphysin II (non-exact 69% aa)	1 .	AF001383							
		<del></del>	<u> </u>						

amphiphysin-like (AMPHL)	1	U68485		+	+	П	Γ.	Т	T
amphiphysin-like (AMPHL)	1	AF068918				<del> </del>	Ė		
(low match)	- 1:	D50692	В, Т	<u> </u>	-	-	+	<u> </u>	
amyloid beta (A4)	1	L77864	<del> </del>	+	+	+	<u> </u>	+	· · · · · · · · · · · · · · · · · · ·
precursor protein-binding, family B, member 1 (Fe65) (APBB1)									
amyloid beta (A4) precursor-like protein 2 (APLP2)	6	L27631	Tlymphoma	+	+		+	+.	
ankyrin 3, node of Ranvier (ankyrin G) (ANK) (non- exact, 50%)	1	U43965							
annexin I (lipocortin I)	1	X05908		+	+	+		+	
annexin II	1	D28364		-	<del> </del>	$\vdash$	<u> </u>	├	
annexin II (lipocortin II; calpactin I, heavy polypeptide) (ANX2)	7	D00017	+	+	+	+	+	+	high in many libraries
annexin IV (placental anticoagulant protein II) (ANX4)	1.	M19383		+	+	+	+	+	
annexin V (endonexin II) (ANX5)	2	M21731		+	+	+		. +	
annexin V (endonexin II) (ANXV)	1.	M19384	*	+	.+	+	7.	+	
annexin VI (p68) (ANX6)	6	Y00097		+	+	+		+	
annexin VII (synexin) (ANX7)	. 1	J04543 .		+	+	+		+	
antigen identified by monoclonal antibodies 12E7, F21 and O13 (MIC2)	2	M16279		+	+	+		+	
antigen identified by monoclonal antibodies 4F2, TRA1.10, TROP4, and T43 (MDU1)	3	J02939		+	+	+	+	+	
antigen TQ1	. 1					<del> </del>		H	· ·
anti-oxidant protein 2 (non- selenium glutathione peroxidase, acidic calcium- independent phospholipase A2) (KIAA0108)	1	D14662		+	+	+	.+	+	,
APEX nuclease (multifunctional DNA repair enzyme) (APEX)	5 .	X66133		+	+		+	+	
Apolipoprotein L (APOL) (59%aa)	1	Z82215							
apoptosis inhibitor 1 (API1)	-1	L49431		+	+	+	+	+	· · · · · · · · · · · · · · · · · · ·
apoptosis inhibitor 4 (survivin) (API4)	4 .	U75285	B, W	+	+		+	<u> </u>	
apoptosis inhibitor 5 (API5)	1	U83857	Tlymphoma	+	<u> </u>		+	-	
apoptosis specific protein (ASP)	1	Y11588	В	+	<del> </del> -		+	+	
apoptotic protease activating factor (APAF1)	1	AF013263	В	+	+		+	<del>                                     </del>	
aquaporin 3 (AQP3)	1	AB001325			<del> </del>	-	+	<del>                                     </del>	
aquaporin 9 (AQP9)	7	AB008775	Tactivated		$\vdash$	$\vdash$	+	$\vdash$	
arachidonate 12- lipoxygenase (ALOX12)	1	M58704	T.				+	+	
arachidonate 5- lipoxygenase-activating protein (ALOX5AP)	3	X52195	+	. +		+	-	+	
ariadne homolog (ARI)	1	AJ009771	+	+	+	+		+	
ariadne-2 (D. melanogaster) homolog (all-trans retinoic acid inducible RING finger) (ARI2)	1	AF099149	+	+	+	+		+	-

ARP1 (actin-related protein 1, yeast) homolog A (centractin alpha)	1	X82206		+			1+			
(ACTR1A)										
ARP2 (actin-related protein 2, yeast) homolog (ACTR2)	9 .	AF006082		+	+		+	+		
ARP2/3 protein compex subunit 34 (ARC34)	5	AF006085	T activated, W	+	+		+			
Arp2/3 protein compex subunit p41 (ARC41)	6	AF006084	monocyte stimulated	+	+		+			
Arp2/3 protein compex subunit p41 (ARC41)) (low match)	1	AF006084								
Arp2/3 protein complex subunit p16 (ARC16)	20	AF017807		+	+		+	+		····
Arp2/3 protein complex subunit p20 (ARC20)	.3	AF006087		+	+		+	+		
Arp2/3 protein complex subunit p21(ARC21)	. 3	· AF006086	W	·		·	+	+		
ARP3 (actin-related protein 3, yeast) homolog (ACTR3)	. 11	AF006083	·W		+		+	+	·	
arrestin, beta 2 (ARRB2)	1	AF106941	B, T, W	+	+	<u> </u>	+			
arsA (bacterial) arsenite transporter, ATP-binding, homolog 1 (ASNA1)	1 :	AF047469	В, Т	+			+			• •
aryl hydrocarbon receptor nuclear translocator-like (ARNTL)	2	AF044288	В	+	+	-	+			·
aryl hydrocarbon receptor- interacting protein (AIP)	1	U31913	+	+	+	+		+		
aryisulfatase A (ARSA)	1	X52151	Tactivated	+		-	+	-		<del> </del>
asialoglycoprotein receptor 2 (ASGR2)	. 1	M11025			-		+	+		
asparaginyl-tRNA synthetase (NARS)	3	D84273		+	+		+			
aspartyl-tRNA synthetase (DARS)	1	J05032	В.	+	+		+			<u> </u>
ataxia telangiectasia mutated (includes complementation groups A, C and D) (ATM)		U82828	В, Т	,	+		+			
ataxin-2-like protein A2LP (A2LG)	1 .	AF034373	B, T activated	+	+			+	5-1	
ATF6	1	AF005887		+			+			
ATP binding cassette transporter (ABCR) (non-exact 80%)	1	U88667							12	
ATP synthase (F1-ATPase) alpha subunit, mitochondrial	. 1	X59066							<del></del>	•
ATP synthase beta subunit	1 1	M19482							<del> </del>	<del></del>
gene ATP synthase, H+		VERNIE								
transporting, mitochondrial F0 complex, subunit b, isoform 1 (ATP5F1)		X60221	+	. *	+	+		+	. ·	
ATP synthase, H+	1	X69907	Tactivated	+	+		+	+		
transporting, mitochondrial F0 complex, subunit c (subunit 9), isoform 1 (ATP5G1)			·							·
ATP synthase, H+ transporting, mitochondrial F1 complex, alpha subunit, isoform 1, cardiac muscle	3	D14710								
(ATP5A1)			<u> </u>	j	]					
ATP synthase, H+ transporting, mitochondrial F1 complex, alpha subunit, isoform 1, cardiac muscle (ATP5A1) (low match)		D14710								

Itansporting, mitochondrial polypepide (ATP58)		· .	<u> </u>							C1/CA00/00003
F1 complex, beta polypeptide (ATP58)	ATP synthase, H+	2	M27132		1:	1	1	Τ_	Т	1
polypepide (ATP58)	transporting, mitochondrial	1			ľ	1		1 .	1	
APP synthase, H+ transporting to the proton purple (APPEC)	F1 complex, beta		,		ļ	1		1	١.	4.
Iransporting, mitochondrial   File Complex, gamma   Dolypeptide   (ATPECT)   AFF cynibase, H-H transporting, mitochondrial   File, subunit g (ATPSJG)   CATPSJG   CA	polypeptide (ATP5B)	1	}	ļ	1	1	1		1	
Iransporting, mitochondrial		1	D16563	W	+	+	+	+	+	<del></del>
polypeptide 1 (ATPSC1)	transporting, mitochondrial	1			1			-	1	
ATP synthase, I+I transporting, Introduced in I AF092124			1 .			١.	١.	1	1	i
Itansporting, mitochondria						i				
Itansporting, mitochondrial   FIFO, subunit g (ATPS)G    ATPIGTP-binding protein   2	ATP synthase, H+	1	AF092124	+	+	++	+	+	╁	
FIFO, subunit g (ATPSJG)	transporting, mitochondrial				1	1	l	] `·	Ι΄.	
ATPSICE T-binding protein (HEAB) ATPSICE, C3++ Iterasporting, ubiquitous (ATP2AS) ATPSICE, HF transporting, lysosomal (vacuolar proton pump) 31kD (ATPE) ATPSICE, HF transporting, lysosomal (vacuolar proton pump) 31kD (ATPE) ATPSICE, HF transporting, lysosomal (vacuolar proton pump) 42kD; Vacuolar proton pump), 1 bin polypeptide, subunit C; V-ATPSice, s	F1F0, subunit a (ATP5JG)	1 .	· ·			1	l .	1		1.
(HEAB) ATPase, Ca+ Iransporting, ubiquitous (ATP2A3) ATFase, H- transporting, yosocmal (vacuolar proton pump) 21kb (ATP6F) ATPase, H- transporting, yosocmal (vacuolar proton pump) 21kb (ATP6F) ATPase, H- transporting, yosocmal (vacuolar proton pump) 21kb (Vacuolar proton-ATPase, subunit C (ATP6D) ATPase, H- transporting, yosocmal (vacuolar proton pump), subunit C (ATP6D) ATPase, H- transporting, yosocmal (vacuolar proton pump), subunit (ATP6A1) ATPase, H- transporting, yosocmal (vacuolar proton pump), beab polypeptide, (ATP6B2) ATPase, H- transporting, yosocmal (vacuolar proton pump), beab polypeptide, (ATP6B3) ATPase, H- transporting, yosocmal (vacuolar proton pump), subunit 1 (ATP6S1) ATPase, H- transporting, yosocmal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassetia 50 1 AF027302 1 AF-Dinding cassetia 50 1 AF027302 1 AF047680 1 A	ATP/GTP-binding protein	2	U73524	+	+	<del>  ·</del>	1	+-	+-	<del>                                     </del>
Iransporting, ubiquitous	(HEAB)	_ ·			1	'.		1	1	
Iransporting, ubiquitous	ATPase, Ca++	5	760881	<del></del>	-	┼—	-	₩	₩	
ATP28.4  H-transporting,   yesosmal (vacuolar proton pump) 21kD (ATP6E)	transporting, ubiquitous			1	•	1	1	l	1	.1.
	(ATP2A3)		٠,					1	1	
	Allease, H+ transporting	<del>''</del> ''	DRODES	<del></del>	1	12.1	<b>├</b>	┷	<del>} }</del>	- /
pump) 21kD (ATP66)	ivsosomal (vacuolar proton	-	D03032	T .		*	*		*	
AlPase, H+ transporting, yesosmal (vacuolar proton pump) 31kD (ArP6E) AlPase, H+ transporting, yesosmal (vacuolar proton pump) 31kD (ArP6E) AlPase, H+ transporting, yesosmal (vacuolar proton pump) 42kD; Vacuolar proton-ArPase, subunit C (ArP6D) AlPase, H+ transporting, yesosmal (vacuolar proton pump), selba polypeptide, 70kD, isoform 1 (ArP6A) AlPase, H+ transporting, yesosmal (vacuolar proton pump), beta polypeptide, 26/58kD, soform 2 (ArP6A) AlPase, H+ transporting, yesosmal (vacuolar proton pump), beta polypeptide, 26/58kD, soform 2 (ArP6A) AlPase, H+ transporting, yesosmal (vacuolar proton pump), member J (ArP6A) AlPase, H+ transporting, yesosmal (vacuolar proton pump), member J (ArP6A) AlPase, H+ transporting, yesosmal (vacuolar proton pump), member J (ArP6A) AlPase, H+ transporting, yesosmal (vacuolar proton pump), member J (ArP6A) AlPase, H+ transporting, yesosmal (vacuolar proton pump), member J (ArP6A) AlPase, H+ transporting, yesosmal (vacuolar proton pump), member J (ArP6A) AlPase, H+ transporting, yesosmal (vacuolar proton pump), member J (ArP6A) AlPase, H+ transporting, yesosmal (vacuolar proton pump), member J (ArP6A) AlPase, H+ transporting, yesosmal (vacuolar proton pump), member J (ArP6A) AlPase, H+ transporting, yesosmal (vacuolar proton pump), member J (ArP6A) AlPase, H+ transporting, yesosmal (vacuolar proton pump), member J (ArP6A) AlPase, H+ transporting, yesosmal (vacuolar proton pump), member J (ArP6A) AlPase, H+ transporting, yesosmal (vacuolar proton pump), member J (ArP6A) AlPase, H+ transporting, yesosmal (vacuolar proton pump), member J (ArP6A) AlPase, H+ transporting, yesosmal (vacuolar proton pump), member J (ArP6A) AlPase, H+ transporting, yesosmal (vacuolar proton pump), member J (ArP6A) AlPase, H+ transporting, yesosmal (vacuolar proton pump), member J (ArP6A) AlPase, H+ transporting, yesosmal (vacuolar proton pump), member J (ArP6A) AlPase, H+ transporting, yesosmal (vacuolar proton pump), member J (ArP6A) AlPase, H+ transporting, yesosmal (vacuolar proton pump), member J (ArP	pump) 21kD (ATP6F)	i			1	1			1	
	ATPase H+ transporting	<del> </del>	V76770		-			<u> </u>	Ц.,	
pump  31kD (ATP6E)	lysosomal (vacuater proton	'	A/0220	1	. *	*	+	1	+	•
Alfrese, H+ fransporting, yesosmal (vacuolar proton pump) 4zkD; Vacuolar proton pump) 4zkD; Vacuolar proton pump) 4zkD; Vacuolar proton pump) 4zkD; Vacuolar proton pump), alpha pohyepitida, yesosmal (vacuolar proton pump), alpha pohyepitida, yesosmal (vacuolar proton pump), bata vacuolar proton pump), member J (Alfred) Alfrese, H+ transporting, yesosmal (vacuolar proton pump), member J (Alfred) Alfrese, H+ transporting, 1 D16469 Infrase, H+ transporting, 2 AF038954 Infrase, H+ transporting, 2	loumn) 31kD (ATP6F)	l* .			l		l	1	l	
	ATPase Ht transporting	<del></del>	VEDARA	<u> </u>	<u> </u>	<u> </u>			ŀ	<u> </u>
pump) 42kD; Vacuoiar proton-protons, subunit C; V-ATPase, subunit C; V	ilvsosomal (vacuolar amton	9	VORIDI	1	+	+	+		+	· · · · · · · · · · · · · · · · · · ·
proton-ATPase, subunit C (ATP6B)   Subunit C	loumn) 42kD: Vacuator		1.	1 .			l	1	1	,
subunit C, V-ATPase,         subunit C, V-ATPase,           subunit C, MCTPBD)         ATPase, H+ transporting,           ATPase, H+ transporting,         3           LO9235         +         +           Yesosmal (vacuolar proton pump), beta polypeptide,         5(ATP682)         +         +         +           ATPase, H+ transporting, yesosmal (vacuolar proton pump), beta polypeptide,         5(SSRD, isoform 2         -         + </td <td>Iproton-ATPage</td> <td></td> <td>•</td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td>1</td> <td></td>	Iproton-ATPage		•	1					1	
Subunit C (ATP6D)   ATP3E, H+ transporting, lysosomal (vacuolar proton pump), alpha polypeptide, 170kD, isoform 1 (ATP6A1)   ATP3E, H+ transporting, lysosomal (vacuolar proton pump), beta polypeptide, 18058kD, isoform 2 (ATP6B2)   ATP3E, H+ transporting, lysosomal (vacuolar proton pump), beta polypeptide, 18058kD, isoform 2 (ATP6B2)   ATP3E, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6B)   ATP3E, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6B1)   ATP3E, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6B1)   ATP3E, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6B1)   ATP3E, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6B1)   ATP3E, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6B1)   ATP3E, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6B1)   ATP3E, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6B1)   ATP3E, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6B1)   ATP3E, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6B1)   ATP3E, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6B1)   ATP3E, Lysosomal (vacuolar proton		I	1			·		١.		
AIP-ase, H+ transporting, lysosomal (vacuolar proton pump), alpha polypeptide, 70kD, isoform 1 (AIPSA1) AIP-ase, H+ transporting, lysosomal (vacuolar proton pump), beta polypeptide, 56/58kD, isoform 2 (AIPSB, H+ transporting, lysosomal (vacuolar proton pump), beta polypeptide, 56/58kD, isoform 2 (AIPSB, H+ transporting, lysosomal (vacuolar proton pump), member J (AIPSB, AIPsase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (AIPSB) AIP-ase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (AIPSB) AIP-binding cassete 50		· ·	1		l	l		l	ı	<b>i</b> .
		<del></del>	TODARE	<del> </del>	<u> </u>	<u> </u>	L		L	<u> </u>
pump), alpha polypeptide, 70kD, isoform 1 (ATP6A1) ATPase, H+ transporting, 19sosomal (vacuolar proton pump), beta polypeptide, 56/58kD, isoform 2 (ATP6B2) ATPase, H+ transporting, 2 AF038954 + + + + + + high in testis pump), member J (ATP6J) ATPase, H+ transporting, 1 D16469 + + + + + + + high in testis pump), member J (ATP6J) ATPase, H+ transporting, 1 D16469 + + + + + + + + high in testis pump), member J (ATP6J) ATP-se, H+ transporting, 1 D16469 + + + + + + + + + + + + + + + + + + +	vensomal (vacualar proton	. 3	LU9235	1	+	1 :	+			
70kD, isoform 1 (ATP6A1)   ATP3s, H+ transporting, lysosomal (vacuolar proton pump), beta polypeptide, 56/58kD, isoform 2 (ATP6B2)   AF038954   + + + + + + + + + + + + + + + + + +	injump) alpha polypoptide			ł	l	1	1		1	
AlPase, H+ transporting, lysosomal (vacuolar proton pump), beta polypeptide, 56/58kD, isoform 2 (ATP68) AlPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP68) AlPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP68) AlPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP681) AlP-binding cassette 50 lare for the foliation of the foliation	70kD isoform 1 (ATDEA4)	1 -	'	1 .	l		ĺ	1	l	i i
	ATPace Ut transporting	ļ	Vana						<u>L</u>	·
pump), beta polypeptide, 56/58kD, isoform 2 (ATP6B2) ATPase, H+ transporting, yososmal (vacuolar proton pump), member J (ATP6B1) ATPase, H+ transporting, 1 pump), member J (ATP6B1) ATPase, H+ transporting, 1 pump), member J (ATP6B1) ATPase, H+ transporting, 1 pump), subunit 1 (ATP6S1) ATP-sinding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette 1 AF047690 (mitochondrial) ATP-dependent RNA 1 AJ010840 T lymphoma + + helicase autoantigen (Hs.7528) 2 L05425 T activated autoantigen (Hs.7528) 1 L05425 (non-exact 84%) autoantigen (Hs.75528) 1 L05425 (non-exact 84%) autoantigen (Hs.75682) 1 U17474 B + + autoantigen (Hs.75682) 1 AF09674 T + axonemal dynein heavy chain (DNAH17) 1 AF009674 T + AJ000522 C + Chain (DNAH17) 1 AB017111	hypersonal (version market	6	X62949	+ -	+	+	+	Ţ.	+	
56/58kD, isoform 2 (ATPGB2) ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATPGB1) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATPGS1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABCS0) ATP-binding cassette 1 AF047690 protein M-ABC1 (mitochondrial) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA 1 AJ010840 T lymphoma + + + autoantigen (Hs.75528) autoantigen (Hs.75528) 2 L05425 T activated + autoantigen (Hs.75682) autoantigen (Hs.75682) 1 U17474 B + + + + + + + + + + + + + + + + + +	nump) bote selected	. *		i	ŀ		ľ			`
(ATP682) ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6SI) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette 1 AF047690 protein M-ABC1 (mitochondrial) ATP-dependent RNA helicase autoantigen (Hs.75528) 1 L05425 Tactivated + autoantigen (Hs.75528) 1 L05425 Tactivated + autoantigen (Hs.75528) 1 L07474 B + autoantigen La/SS-B 1 Z35127 axin (AXIN1) 1 AF09674 T + autoantigen La/SS-B 1 AB017111 BAI1-associated protein 3 (BAIAP3) (non-exact 54%) basement membrane- induced gene (ICB1) basic leucine zipper nuclear factor 1 (JEM-1) (BLZF1) basic (Eranscription factor 3 (BTF3))	66/58kD isoform 2			ł	1	i .				
AF038954 + + + + + + + + + + + + + + + + + + +	SOISOND, ISOIOTHI Z		l · .	1	ı				ı	
	I/ATDED91					I .			1	
pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA helicase autoantigen (Hs.75528) autoantigen (Hs.75528) 1				<u> </u>	,		•		ĺ	
ATPase, H+ transporting, 1 D16469	ATPase, H+ transporting.	2 .	AF038954	+	+	+	+		+	high in testis
	ATPase, H+ transporting, lysosomal (vacuolar proton	2	AF038 <b>954</b>	+	.+	+	+		+	high in testis
pump), subunit 1 (ATP6S1)  ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50)  ATP-binding cassette protein M-ABC1 (mitochondrial)  ATP-dependent RNA helicase autoantigen (Hs.75528)  autoantigen (Hs.75528)  autoantigen (Hs.75528)  1 L05425  (non-exact 84%) autoantigen (Hs.75682)  autoantigen (Hs.75682)  1 U17474  B + + + + + + + + + + + + + + + + + +	ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J)			+	+	+	+		+	high in testis
ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA helicase autoantigen (Hs.75528) autoantigen (Hs.75528) 1	ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting.			+						high in testis
(TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA 1 AJ010840 T lymphoma + + helicase autoantigen (Hs.75528) 2 L05425 T activated + autoantigen (Hs.75528) 1 L05425 (non-exact 84%) autoantigen (Hs.75682) 1 U17474 B + autoantigen (Hs.75682) 1 U17474 B + autoantigen La/SS-B 1 Z35127 axin (AXIN1) 1 AF009674 T + axonemal dynein heavy chain (DNAH17) BAI1-associated protein 3 1 AB017111 (BAIAP3) (non-exact 54%) basement membrane- induced gene (ICB1) basic leucine zipper nuclear factor 1 (JEM-1) (BLZF1) basic Iranscription factor 3 5 X74070 + + + + + basigin (BSG) 1 L10240 + +	ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton			+						high in testis
(ABC-50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA	ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1)	1	D16469	•						high in testis
ATP-binding cassette protein M-ABC1 (mitochondrial)  ATP-dependent RNA	ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50	1	D16469		+	+	+		+	high in testis
protein M-ABC1 (mitochondrial) ATP-dependent RNA	ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 TNF-alpha stimulated)	1	D16469		+	+	+		+	high in testis
(mitochondrial)       ATP-dependent RNA       1       AJ010840       T lymphoma       +       +         Arth-dependent RNA       1       AJ010840       T lymphoma       +       +         autoantigen (Hs.75528)       2       L05425       T activated       +         autoantigen (Hs.75582)       1       L05425       1         autoantigen (Hs.75682)       1       U17474       B       +       +         autoantigen La/SS-B       1       Z35127       -       -       -       -       -       +       -	ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50)	1	D16469 AF027302		+	+	+		+	high in testis
ATP-dependent RNA helicase autoantigen (Hs.75528) 2 L05425 T activated + autoantigen (Hs.75528) (non-exact 84%) autoantigen (Hs.75682) 1 U17474 B + autoantigen (Hs.75682) 1 U17474 B +  autoantigen (Hs.75682) 1 U17474 B +  autoantigen (Hs.75682) 1 AF009674 I +  axin (AXIN1) 1 AF009674 I +  AJ000522  chain (DNAH17) BAI1-associated protein 3 (BAIAP3) (non-exact 54%) basement membrane- induced gene (ICB1) basic leucine zipper nuclear factor 1 (JEM-1) (BLZF1) basic transcription factor 3 5 X74070 + + + + +  BCT3	ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette	1	D16469 AF027302		+	+	+		+	high in testis
helicase autoantigen (Hs.75528) 2 L05425 T activated + autoantigen (Hs.75528) 3 L05425 (non-exact 84%) autoantigen (Hs.75682) 4 U17474 B + 4 autoantigen La/SS-B 5 Z35127 2 axin (AXIN1) 5 AF009674 T + 2 axonemal dynein heavy 5 chain (DNAH17)  BAI1-associated protein 3 T AB017111 (BAIAP3) (non-exact 54%) basement membrane- induced gene (ICB1) basic leucine zipper nuclear factor 1 (JEM-1) (BLZF1) basic transcription factor 3 T AV4070 + T T T T T T T T T T T T T T T T T T	ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1	1	D16469 AF027302		+	+	+		+	high in testis
autoantigen (Hs.75528)	ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial)	1	D16469 AF027302	+	+	+	+		+	high in testis
autoantigen (Hs.75528) (non-exact 84%) autoantigen (Hs.75682)  autoantigen (Hs.75682)  autoantigen La/SS-B  1	ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA	1	D16469  AF027302  AF047690	+	+	+	+		+	high in testis
(non-exact 84%) autoantigen (Hs.75682)	ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA helicase	1	D16469  AF027302  AF047690  AJ010840	+	+	+	+		+	high in testis
(non-exact 84%) autoantigen (Hs.75682)	ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA helicase autoantigen (Hs.75528)	1	D16469  AF027302  AF047690  AJ010840	+ T lymphoma	+	+	+	•	+	high in testis
autoantigen (Hs.75682) 1 U17474 B + + + + + + + + + + + + + + + + + +	ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA helicase autoantigen (Hs.75528)	1 1 2	D16469  AF027302  AF047690  AJ010840  L05425	+ T lymphoma	+	+	+	•	+	high in testis
autoantigen La/SS-B	ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA helicase autoantigen (Hs.75528) autoantigen (Hs.75528)	1 1 2	D16469  AF027302  AF047690  AJ010840  L05425	+ T lymphoma T activated	+	+	+	+	+	high in testis
axin (AXIN1)	ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA helicase autoantigen (Hs.75528) autoantigen (Hs.75528)	1 1 2 1	D16469  AF027302  AF047690  AJ010840  L05425  L05425	+ T lymphoma T activated	+	+	+	+	+	high in testis
axonemal dynein heavy chain (DNAH17)  BAI1-associated protein 3	ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA helicase autoantigen (Hs.75528) autoantigen (Hs.75528) (non-exact 84%) autoantigen (Hs.75682)	1 1 2 1	D16469  AF027302  AF047690  AJ010840  L05425  L05425  U17474	+ T lymphoma T activated	+	+	+	+	+	high in testis
axonemal dynein heavy chain (DNAH17)  BAI1-associated protein 3 (BAIAP3) (non-exact 54%) basement membrane-induced gene (ICB1)  basic leucine zipper nuclear factor 1 (JEM-1) (BLZF1) basic transcription factor 3 5 X74070 + + + + + + + + + + + + + + + + + +	ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA helicase autoantigen (Hs.75528) autoantigen (Hs.75528) autoantigen (Hs.75682) autoantigen (Hs.75682)	1 1 2 1 1 1	D16469  AF027302  AF047690  AJ010840  L05425  L05425  U17474	+ T lymphoma T activated	+	+	+	•	+	high in testis
chain (DNAH17)  BAI1-associated protein 3 (BAIAP3) (non-exact 54%) basement membrane- induced gene (ICB1) basic leucine zipper nuclear factor 1 (JEM-1) (BLZF1) basic transcription factor 3 (BTF3)  Dasigin (BSG)  1 L10240  AB017111  AB017111  AF044898  1 L10240  + + + + + + + + + + + + + + + + + + +	ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA helicase autoantigen (Hs.75528) autoantigen (Hs.75528) (non-exact 84%) autoantigen (Hs.75682)	1 1 2 1 1 1	D16469  AF027302  AF047690  AJ010840  L05425  L05425  U17474  Z35127	+ T lymphoma T activated B	+	+	+	+	+	high in testis
BAI1-associated protein 3 (BAIAP3) (non-exact 54%) (BAIAP3) (non-exact 54%) (BAIAP3) (non-exact 54%) (BAIAP3) (non-exact 54%) (BIF3) (B	ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA helicase autoantigen (Hs.75528) autoantigen (Hs.75528) autoantigen (Hs.75682) autoantigen La/SS-B axin (AXIN1)	1 1 2 1 1 1 1 1 1	D16469  AF027302  AF047690  AJ010840  L05425  L05425  U17474  Z35127  AF009674	+ T lymphoma T activated B	+	+	+	+	+	high in testis
(BAIAP3) (non-exact 54%) basement membrane- induced gene (ICB1) basic leucine zipper nuclear factor 1 (JEM-1) (BLZF1) basic transcription factor 3 5 X74070 + + + + + + + + + + + + + + + + + +	ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA helicase autoantigen (Hs.75528) autoantigen (Hs.75528) autoantigen (Hs.75682) autoantigen La/SS-B axin (AXIN1) axonemal dynein heavy	1 1 2 1 1 1 1 1 1	D16469  AF027302  AF047690  AJ010840  L05425  L05425  U17474  Z35127  AF009674	+ T lymphoma T activated B	+	+	+	+	+	high in testis
basement membrane- induced gene (ICB1) basic leucine zipper nuclear factor 1 (JEM-1) (BLZF1) basic transcription factor 3 (BTF3) basigin (BSG)  1 L10240 + + + + + + + + + + + + + + + + + + +	ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA helicase autoantigen (Hs.75528) (non-exact 84%) autoantigen (Hs.75682) autoantigen La/SS-B axin (AXIN1) axonemal dynein heavy chain (DNAH17)	1 1 1 1 1 1	D16469  AF027302  AF047690  AJ010840  L05425  L05425  U17474  Z35127  AF009674  AJ000522	+ T lymphoma T activated B	+	+	+	•	+	high in testis
induced gene (ICB1) basic leucine zipper nuclear factor 1 (JEM-1) (BLZF1) basic transcription factor 3 basigin (BSG)  1 L10240 + + + + + + + + + + + + + + + + + + +	ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA helicase autoantigen (Hs.75528) (non-exact 84%) autoantigen (Hs.75682) autoantigen La/SS-B axin (AXIN1) axonemal dynein heavy chain (DNAH17) BAI1-associated protein 3	1 1 1 1 1 1	D16469  AF027302  AF047690  AJ010840  L05425  L05425  U17474  Z35127  AF009674  AJ000522	+ T lymphoma T activated B	+	+	+	+	+	high in testis
basic leucine zipper 2 U79751 nuclear factor 1 (JEM-1) (BLZF1) basic transcription factor 3 5 X74070 + + + + + + + + + + + + + + + + + +	ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA helicase autoantigen (Hs.75528) autoantigen (Hs.75528) autoantigen (Hs.75682) autoantigen La/SS-B axin (AXIN1) axonemal dynein heavy chain (DNAH17) BAI1-associated protein 3 (BAIAP3) (non-exact 54%)	1 1 1 1 1 1 1 1	D16469  AF027302  AF047690  AJ010840  L05425  L05425  U17474  Z35127  AF009674  AJ000522  AB017111	+ T lymphoma T activated B	+	+	+	+	+	high in testis
nuclear factor 1 (JEM-1) (BLZF1) basic transcription factor 3 5 X74070 + + + + + + + + + + + + + + + + + +	ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA helicase autoantigen (Hs.75528) autoantigen (Hs.75528) (non-exact 84%) autoantigen (Hs.75682) autoantigen La/SS-B axin (AXIN1) axonemal dynein heavy chain (DNAH17) BAI1-associated protein 3 (BAIAP3) (non-exact 54%) basement membrane-	1 1 1 1 1 1 1 1	D16469  AF027302  AF047690  AJ010840  L05425  L05425  U17474  Z35127  AF009674  AJ000522  AB017111	+ T lymphoma T activated B	+	+	+	+	+	high in testis
(BLZF1) basic transcription factor 3 5 X74070 + + + + + + + + + + + + + + + + + +	ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA helicase autoantigen (Hs.75528) autoantigen (Hs.75528) autoantigen (Hs.75682) autoantigen La/SS-B axin (AXIN1) axonemal dynein heavy chain (DNAH17) BAI1-associated protein 3 (BAIAP3) (non-exact 54%) basement membrane-induced gene (ICB1)	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	D16469  AF027302  AF047690  AJ010840  L05425  L05425  U17474  Z35127  AF009674  AJ000522  AB017111  AF044896	+ T lymphoma T activated B	+	+	+	+	+	high in testis
basic transcription factor 3 5 X74070 + + + + + + + + + + + + + + + + + +	ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA helicase autoantigen (Hs.75528) autoantigen (Hs.75528) autoantigen (Hs.75528) autoantigen (Hs.75682) autoantigen La/SS-B axin (AXIN1) axonemal dynein heavy chain (DNAH17) BAI1-associated protein 3 (BAIAP3) (non-exact 54%) basement membrane-induced gene (ICB1)	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	D16469  AF027302  AF047690  AJ010840  L05425  L05425  U17474  Z35127  AF009674  AJ000522  AB017111  AF044896	+ T lymphoma T activated B	+	+	+	+	+	high in testis
(BTF3) basigin (BSG) 1 L10240 + +	ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA helicase autoantigen (Hs.75528) autoantigen (Hs.75528) (non-exact 84%) autoantigen (Hs.75682) autoantigen La/SS-B axin (AXIN1) BAI1-associated protein 3 (BAIAP3) (non-exact 54%) basement membrane-induced gene (ICB1) basic leucine zipper nuclear factor 1 (JEM-1)	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	D16469  AF027302  AF047690  AJ010840  L05425  L05425  U17474  Z35127  AF009674  AJ000522  AB017111  AF044896	+ T lymphoma T activated B	+	+	+	+	+	high in testis
(BTF3) basigin (BSG) 1 L10240 + + +	ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA helicase autoantigen (Hs.75528) autoantigen (Hs.75528) autoantigen (Hs.7558) autoantigen La/SS-B axin (AXIN1) axonemal dynein heavy chain (DNAH17) BAI1-associated protein 3 (BAIAP3) (non-exact 54%) basement membrane-induced gene (ICB1) basic leucine zipper nuclear factor 1 (JEM-1) (BLZF1)	1 1 1 1 1 1 1 2	D16469  AF027302  AF047690  AJ010840  L05425  L05425  U17474  Z35127  AF009674  AJ000522  AB017111  AF044896  U79751	+ T lymphoma T activated B	+	+	+	•	+	high in testis
	ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA helicase autoantigen (Hs.75528) autoantigen (Hs.75528) autoantigen (Hs.75528) autoantigen (Hs.75682) autoantigen (Hs.75682) autoantigen La/SS-B axin (AXIN1) axonemal dynein heavy chain (DNAH17) BAI1-associated protein 3 (BAIAP3) (non-exact 54%) basement membrane-induced gene (ICB1) basic leucine zipper nuclear factor 1 (JEM-1) (BLZF1)	1 1 1 1 1 1 1 2	D16469  AF027302  AF047690  AJ010840  L05425  L05425  U17474  Z35127  AF009674  AJ000522  AB017111  AF044896  U79751	T lymphoma T activated B	+ + +	+ + +	+		+	high in testis
	ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA helicase autoantigen (Hs.75528) autoantigen (Hs.75528) autoantigen (Hs.75528) autoantigen (Hs.75682) autoantigen (Hs.75682) autoantigen La/SS-B axin (AXIN1) axonemal dynein heavy chain (DNAH17) BAI1-associated protein 3 (BAIAP3) (non-exact 54%) basement membrane-induced gene (ICB1) basic leucine zipper nuclear factor 1 (JEM-1) (BLZF1) basic transcription factor 3 (BTF3)	1 1 1 1 1 1 1 2	D16469  AF027302  AF047690  AJ010840  L05425  L05425  U17474  Z35127  AF009674  AJ000522  AB017111  AF044898  U79751  X74070	T lymphoma T activated B	+ + +	+ + +	+		+	high in testis
	ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA helicase autoantigen (Hs.75528) autoantigen (Hs.75528) autoantigen (Hs.75528) autoantigen (Hs.75682) autoantigen (Hs.75682) autoantigen La/SS-B axin (AXIN1) axonemal dynein heavy chain (DNAH17) BAI1-associated protein 3 (BAIAP3) (non-exact 54%) basement membrane-induced gene (ICB1) basic leucine zipper nuclear factor 1 (JEM-1) (BLZF1)	1 1 1 1 1 1 1 2 5	D16469  AF027302  AF047690  AJ010840  L05425  L05425  U17474  Z35127  AF009674  AJ000522  AB017111  AF044898  U79751  X74070	T lymphoma T activated B	+ + +	+ + +	+	+	+	high in testis
	ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA helicase autoantigen (Hs.75528) autoantigen (Hs.75528) autoantigen (Hs.75528) autoantigen (Hs.75682) autoantigen (Hs.75682) autoantigen La/SS-B axin (AXIN1) axonemal dynein heavy chain (DNAH17) BAI1-associated protein 3 (BAIAP3) (non-exact 54%) basement membrane-induced gene (ICB1) basic leucine zipper nuclear factor 1 (JEM-1) (BLZF1) basic transcription factor 3 (BTF3)	1 1 1 1 1 1 1 2 5 1	D16469  AF027302  AF047690  AJ010840  L05425  L05425  U17474  Z35127  AF009674  AJ000522  AB017111  AF044898  U79751  X74070  L10240	T lymphoma T activated B	+ + +	+ + +	+	+	+	high in testis

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B-cell CLU/lymphoma 6 (zinc finger protein 51) (BCL6)	1	U00115		+	+				
B-cell translocation gene 1, anti-proliferative (BTG)	1	X61123			. +	-	-	+	
BCL2/adenovirus E1B 19kD-interacting protein 2 (BNIP2)	1	U15173	В	+			+	+	
BCL2/adenovirus E1B 19kD-interacting protein 3- like (BNIP3L)	2	AF067396		+	+	+		+	
beclin 1 (coiled-coil, myosin-like BCL2- interacting protein)	1	AF077301	. В	+	+	٠.	+	·	
(BECN1) beta-1,2-N- acetylglucosaminyltransfer	2	U15128							
ase II (MGAT2) beta-2-microglobulin (B2M)	63	S82297	+	+	. +	+	+	+	high in invesive
beta-hexosaminidase alpha chain (HEXA)	1	M16411		-			-		prostate tumor
beta-tubulin	7	V00599	+	+	+	+	+	+	high in many libraries
beta-tubulin (non-exact, 76%)	.1.	AF070561							
beta-tubulin, pseudogene	1	J00315	· · · · · · · · · · · · · · · · · · ·					<u> </u>	
BING4	1	Z97184	T				$\vdash$		
biotinidase (BTD) (non-eact 62%)	1	U03274				П			
biotinidase (BTD) (non- exact 70%)	1	U03274							
biotinidase (BTD) (non- exact, 56%)		U03274							
BIOTINIDASE PRECURSOR	1	P43251							
biphenyl hydrolase-like (serine hydrolase) (BPHL) bone marrow stromal cell		X81372		+			+		
antigen 1 (BST1) box-dependent myc-		D21878					+		
interacting protein isoform BIN1-10 (BIN1)		AF043900					,	-	
box-dependent myc- interacting protein isoform BIN1-10 (BIN1) (non-exact, 64%)	1	AF043900							
brain my047 protein	1	AF063605		+	+		+		
branched chain keto acid dehydrogenase E1, alpha polypeptide (maple syrup	3	Z14093	T .	+	.+		+		÷ .
urine disease) (BCKDHA) BRCA1 associated protein-		D07//6/2							
1 (ubiquitin carboxy- terminal hydrolase) (BAP1)		D87462	•	•	*	+			
BRCA1, Rho7 and vati genes, and ipf35	1	L78833			•	·			-
breakpoint cluster region protein, uterine leiomyoma, 1; barrier to autointegration factor (BCRP1)	2	AF044773		+	+				
breakpoint cluster region protein, uterine leiomyoma, 2 (BCRP2)		AF044774	0	. +	+		+	+	
breast cancer anti-estrogen resistance 3 (BCAR3) (non-exact 73%) bromodomain-containing	1	U92715							*
protein, 140kD (peregrin) (BR140) Bruton's		M91585		+					
agammaglobulinemia tyrosine kinase (Btk)	1	U13424							

		·						•	CICAUUIUUU
Bruton's tyrosine kinase (BTK)	1 -	U78 <b>027</b>							· .
Bruton's tyrosine kinase (BTK), alpha-D- galactosidase A (GLA).	<del>1</del> ;	U78 <b>027</b>							
L44-like ribosomal protein (L44L) and FTP3 (FTP3)							ŀ		- 1
BS4	1	AF108083		·		Π	Г		
BTG2 (BTG2)	6	Y09943	+ .	+	+	+	·	+	·
BTK region clone ttp	1	U78027	+	+	+	+	1	+	
BTK region clone ftp-3		U01923		+	+		+		
BUB3 (budding uninhibited by benzimidazoles 3, yeast) homolog (BUB3)	4	AF05 <b>3304</b>	+	+	+	+		+	
ਰਿਤਾਸਕੀਏ response factor 1 (EGF-response factor 1) (BRF1)	. पृथः	A73087	Tr. 16	+""	-	+	31,2		والمراجعة المستعدية والمستعددة والمستعددة
butyrophilin (BTF1)	7	U90543		+	+		+		· · · · · · · · · · · · · · · · · · ·
butyrophilin like receptor	1	AB020625.1		<b>-</b>	-	<del>                                     </del>			
CAG repeat containing (CTG4A)	2	U80744		+	+				
CAGH32	2	U80743		+	+		+		
calcium channel, voltage- dependent, L type, alpha 1D subunit (CACNA1D) (low match)	• • • • • • • • • • • • • • • • • • •	M83566							:
calcium/calmodulin- dependent protein kinase (CaM kinase) Il gamma (CAMK2G)		AF069765		+	+	+		+	i i
calcium/calmodulin- dependent protein kinase kinase (KIAA0787)	1	AF101264	В	+	+		+		,
calmodulin (≃M19311)	7	. D45887							•
calmodulin 1 (phosphorylase kinase, delta) (CALM1)	6	M27319	В	+	+		+	+	
calnexin (CANX)	3	M94859	1	+			+	+	
calpain, large polypeptide L1 (CAPN1)	5,	X04366		+	+		+	+	_
calpain, large polypeptide L2 (CANP2)	5	M23254		+	+				
calpain, small polypeptide (CAPN4)	1	X04106		+	+		+	+	•
calpastatin (CAST)	3	D16217					+		_
Calponin 2	2	D83735		+		+		+	
calponin 2 (CNN2)	1	D83735	B, T	+			+		
calponin 2 (CNN2) (low score)	1	D83735							. • .
calumenin (CALU)	3 .	AF013759	В	1	+	_	+	+	
cAMP response element- binding protein CRE-Bpa (H_GS165L15.1)	4	L05912							
cAMP-dependent protein kinase type II (Ht31)	1	M90360							
canicular multispecific organic anion transporter (CMOAT2)	1	AF009670				+	+	+	
capping protein (actin filament) muscle Z-line, alpha 1 (CAPZA1)	6	U56637	В, Т		+			+	*
capping protein (actin filament) muscle Z-line, alpha 2 (CAPZA2)	2	U03269	В	+	+				
capping protein (actin filament) muscle Z-line, beta (CAPZB)	"1	U03271	+ .	+	+	+		+	

capping protein (actin filament), gelsolin-like (CAPG)	8	M94345	+	+.	-	1	ļ.·	+	
carbamoyl-phosphate synthetase 2, aspartate transcarbamylase, and	1	D78586	+	+	.+	+	·	+	
dihydroorotase (CAD) carbonic anhydrase V.	1	L19297		+	ļ		+		
mitochondrial (CA5)									
carboxypeptidase D (CPD)	3	U65090	В	+	+				
camitine/acylcamitine translocase (CACT) Cas-Br-M (murine)	1	Y10319	<u>                                     </u>	+	+	Ŀ	+		•
ecotropic retroviral transforming sequence (cbl)	2	X57110					+		
casein kinase 1, alpha 1 (CSNK1A1)	1	L37042	+	+	+	+	<u> </u>	+	
casein kinase 2, alpha 1 polypeptide (CSNK2A1)	2	M55265	В	+		·	+	+	
casein kinase I gamma 3L (CSNK1G3L)	1	- AF049090.1				<del>                                     </del>			
casein kinase II alpha subunit(=S72393)	1	X69951							
CASP8 and FADD-like apoptosis regulator (CFLAR)	4	AF015450		+	+:	+	+	+	
caspase 1, apoptosis- related cysteine protease (interleukin 1, beta, convertase) (CASP1)	7	U13697	. +			+			
caspase 10, apoptosis- related cysteine proteas (CASP10)	1	U60519	B, T activ lymph		Υ		+		
caspase 3, apoptosis- related cysteine protease (CASP3)	3	U13737	B, T	+	+	+	+		
caspase 4, apoptosis- related cysteine protease (CASP4)	6	U25804	+	+	+	+		+	
caspase 5, apoptosis- related cysteine protease (CASP5)		U28015			+			·	
caspase 8, apoptosis- related cysteine protease (CASP8)	2	X98173		+		+		+	
caspase 9, apoptosis- related cysteine protease (CASP9)	1	U56390	8			+	+		
catalase (CAT)	5	X04076	В	+	+		+		:
catechol-O- methyltransferase (COMT)	1	M65213		+	+		+		
catenin (cadherin- associated protein), alpha 1 (102kD) (CTNNA1)		D14705		+	+				
cathelicidin antimicrobial peptide (CAMP)	1	X89658	В						·.
cathepsin B (CTSB)	4	L16510			+		+	+	
cathepsin C (CTSC)	3	U79415		+	+	+		+	
cathepsin D (lysosomal aspartyl protease) (CTSD)	4	M11233		+	+	·	+		
cathepsin E (CTSE)	1	J05036					+		
cathepsin G (CTSG) cathepsin S (CTSS)	1	M16117	T.W		+				
	34	M86553	B, Monocyte	stime		, T	+	+	
cathepsin W (lymphopain) (CTSW)	4	AF013611			*			+	
CBF1 interacting corepressor CIR (=U03644	1	AF098297							

		·		<u></u>						
	CCAAT/enhancer binding protein (C/EBP), alpha (CEBPA)	3	X87248		+	+	+	.	+	
	CCAAT/enhancer binding protein (C/EBP), delta (CEBPB)	1	S63168			+		+	+	
	CCAAT-box-binding transcription factor (CBF2)	2	M37197	Tlymphoma			+	+	<del> </del>	
	CCR5 receptor (CCR5) (non-exact?)	1 .	AF011504		8				$\vdash$	
	CD14 antigen (CD14)	11	M86511	+	+	+	+	<del>                                     </del>	+	
	CD18 (=M95293)	4	X64071			<del>                                     </del>	├-	<del> </del>	<del>-</del>	
i	CD1C antigen, c polypeptide (CD1C)	2	M28827		<del></del> -		$\vdash$		+	
	CD2 antigen (cytoplasmic tali)-binoing protein 2 (CD2BP2)	1	AF 104222	)			: '			
ĺ	CD2 antigen (p50), sheep red blood cell receptor (CD2)	4.	M14362	+		+	+		+	
	CD2 cytoplasmic tail- binding protein 1 (CD2BP1)		AF038602			·		+		
	CD20 antigen (CD20)	1	X12530							
- [	CD20 receptor (S7)	1	X07203			<u> </u>	T	T		
- 1	CD22 antigen (CD22)	1	U62631	В		<u> </u>	_	-	_	
	CD24 signal transducer	1	M58664			_	<del>                                     </del>	-	-	
	CD33 antigen (gp67)	. 1	M23197			<del> </del>		+	<b>-</b>	
t	(CD33) CD33 antigen-like 2; OB	. 1	U71383	0.			_	-	-	
ı	binding protein-2 (CD33L2) (non-exact, 68%) CD33L2 (61% aa)								·	
	CD36 antigen (collagen	1	D86359							
	type I receptor, thrombospondin receptor) (CD36)	7	M98398	T lymphoma		+		+	+	
	CD37 antigen (CD37)	5	X14046	+	+		+		+	
- 1	CD38 alt	1	D84277			·	-		-	
Ì	CD39 antigen (CD39)	1	U87967	В	+		-	+	+	
Ì	CD3D antigen, delta polypeptide (TiT3 complex) (CD3D)	1 .	X03934	·		+	+		+	
	CD3E antigen, epsilon polypeptide (TiT3 complex) (CD3E)	1	X03884	+			+.			
l	CD3G antigen, gamma polypeptide (TiT3 complex) (CD3G)	2	X06026	W				+		
I	CD3Z antigen, zeta polypeptide (TiT3 complex) (CD3Z)	2 .	J04132	+			+			
	CD3-zeta (clone pBS NK1)	1	X55510			·-	$\vdash$	$\neg$		
	CD4 (low match)	1	S68 <b>043</b>				$\neg$			<del></del>
	CD4 antigen (p55) (CD4)	4	M12807	-	+ -	+		+		<u> </u>
	CD44 antigen (homing function and Indian blood group system (CD44)		X56794	W				+	+	-
þ	CD48 antigen (B-cell nembrane protein) (CD48)	3	X06341	+	+	+	+		+	
	CD53 antigen (CD53)	10	L11670	+	+		+		+	
þ	CD53 antigen (CD53) (low natch)	1	M60871							
ŀ	CD63 antigen (melanoma 1 antigen) (CD63)	3	M59907							
L	CD68 antigen (CD68)	2	557235		+	+		+	+	
				<del></del>						

CD74 antigen (invariant	72	K01144	+	+	+	+	1+	+	high in many libraries
polypeptide of major histocompatibility complex,			1		ľ	l			
class II antigen-associated)		1	1.	i		1	1	1	·
(CD74)			•			1		1	
CD79A antigen	2	M80462	·	<del>                                     </del>	+	+-		┼	
(immunoglobulin-	_		1 .	1	`		1	1	' ' '
associated alpha) (CD79A)			1			1	1	'	
CD79B antigen	2	· M89957	+	<u> </u>				1	
(immunoglobulin-					١.	1		İ	
associated beta) (CD79B)				<u> </u>		ļ .	7		
CD8 antigen, alpha polypeptide (p32) (CD8A)	2	M27161	+			+		+	
CD8 antigen, beta	<del></del>	V45445					<u> </u>		
polypeptide 1 (p37)	1	X13445	W		١.	Ì	İ		
(CD8B1)		*	*	j	i		l		
CD81 antigen (target of	<del></del>	M33680	<del></del>	+	+	<u> </u>	-	+	<u> </u>
antiproliferative antibody 1	•	14155000		1	+	1		T .	
(CD81)				ł	]	١.	]		·
CD83 antigen (activated B	<b>1</b>	Q01151	В	+	+	<del> </del> -	<del> </del>	+	
lymphocytes,					:	1			! ·
mmunoglobulin			1 .			1			
superfamily) (CD83)				L_	L.	L	L	L.	,
CD84 antigen (leukocyte	1	U82988		+	+			+	
antigen) (CD84)								l	· ·
CD86 antigen	1	L25259		+			П		
CD9 antigen (p24) (CD9)	2	M38690	<u> </u>	<del>                                     </del>	+		+	+	<del></del>
CD97 antigen (CD97)	12	X84700	+	+		+	<u> </u>		
CD97 antigen (CD97)								<u> </u>	
(noin-exact 59%)	1	P48960	1	1					
CD97 antigen (CD97) (non-	1	X94630	<del>                                     </del>	ļ	<u> </u>	ļ.,		<u> </u>	· · · · · · · · · · · · · · · · · · ·
exact 62%)	ı	^9 <del>4</del> 030	T	+	1	+		-	· · · ·
CDC23 (cell division cycle	1	AF053977	ļ	+-			+	+	
23, yeast, homolog)	•	A 000077	į i	T .	1		*	T .	·
(CDC23)				l	i .				•
CDC37 homolog	1	U63131	В	+	+	<del> </del>	+	+	· · · · · · · · · · · · · · · · · · ·
Cdc42 effector protein 3	2	AF104857	В	+	+	_	+		
(CEP3)	•	· Ai 107031	' '	*	1	ĺ	▼	]. :	·
CDC-like kinase (CLK)	7	L29219	<del> </del>	+	+	+	_	+	
CDC-like kinase 2 (CLK2)	1	AF023268	В	+			L	L.	
			1	,	+				
CDW52 antigen (CAMPATH-1 antigen)	13	X15183	Tactivated	+	+		+		
(CDW52)							•	1	
cell cycle progression	1	AE044704				L			
restoration 8 protein(CPR8)	1	AF011794.							1
cell division cycle 10	4	S72008	+	+	+	_			
(homologous to CDC10 of	*	. 372006		+	+	+		+	•
S. cerevisiae) (CDC10)								•	
cell division cycle 20,	7	U05340		+	+	+		$\vdash$	
S.cerevisiae homolog	· ,			•	'	'			
(CDC20)		•							
cell division cycle 25B	6	Z68092	.+	+	+	+		+	
(CDC25B)									
cell division cycle 2-like 1	1	AF067514		T I					
(PITSLRE proteins)	- 1		·		i '				. 1
(CDC2L1) (non-exact 42%)									
cell division cycle 42 (GTP- binding protein, 25kD)	5	M35543	+	+	+ .	+		+	
(CDC42)			]						
cell division protein (non-	1	AF063015	<u> </u>					-	
exact 68%)	'	WL009019					l		
CELL-CYCLE NUCLEAR	1	Q13033	<del> </del>					$\vdash$	
AUTOANTIGEN SG2NA	•	G 15055	1				ı		
P. O. O. WILLIAM I	i i		1 1						Ì
(S/G2 NUCLEAR			i l	1					· j
(S/G2 NUCLEAR ANTIGEN)			· .						
(S/G2 NUCLEAR ANTIGEN) centromere protein B	1	X55039	<del></del>	+			+		· · · · · · · · · · · · · · · · · · ·
(S/G2 NUCLEAR ANTIGEN) centromere protein B (80kD) (CENPB)		X55039	·	+			+		
(S/G2 NUCLEAR ANTIGEN) centromere protein B	1 3	X55039 AF022655	В	+ +	·		+		

Indianal Indiana Indiana			<del>/</del>						•
ceroid-lipofuscinosis, neuronal 2, late infantile	/	AF017456	+	+	+	+	+	+	high in bone
(Jansky-Bielschowsky				1	1			1	
disease) (CLN2)				[ .		1.		·	•
c-fgr (=M63877	6	X52206		┼	ļ ·	<b>-</b>	ļ.,	<del> </del>	<u> </u>
nonreceptor protein-	٥	V25500	1	1	ŀ	1	į .	<b>l</b> .	
tyrosine kinase (fgr))	1		ľ	1	1	1	1	1	
CGI-19 protein	3	AF132953.1	<del></del>	<del></del>	<u> </u>	ļ	<del>                                     </del>	-	
				1		.1.	<u> </u>		L
chaperonin containing	1	X74801		+	+	1		+	
TCP1, subunit 3 (gamma)		1 '			l		1	٠ ا	
(CCT3)				1	1		1		l ·
chaperonin containing	1 ,	AF026291		+	+		+	+	
TCP1, subunit 4 (delta)		1					1	l	1
(CCT4)		<u> </u>		1	1	1			
chaperonin containing	4	L27706	В	+	+				
TCP1, subunit 6A (zeta 1)	;	1	} . i.		}	! :		<b>}</b> .	11
(CCT6A)		•			1	1			· · ·
chaperonin containing	4	AF026292	В	+		1		+	
TCP1, subunit 7 (eta)					i				l .
(CCT7)		1		1	l	l			•
Chediak-Higashi syndrome	1	U67615	B, T	+	+	$\vdash$	+		·
1 (CHS1)			lymphoma	ı		1		ĺ	
Chediak-Higashi syndrome	1	U67615	7	<del> </del>	-	+	├─	_	
1 (CHS1) (low score)				1	ŀ			1	. •
chemokine (C-C motif)	4	U03905	<u> </u>	<del>                                     </del>	<del> </del>	<del> </del>	<del> </del>	├─	· · · · · · · · · · · · · · · · · · ·
receptor 2 (CCR2)	·		.:	l		1			
chemokine (C-C motif)	1	X85740	<del></del>	<del> </del>		-	<del>                                     </del>	<del> </del>	
receptor 4 (CCR4) (low	• •	100770	1	i		I	l	l	
match) (may contain			Ι .	l	1	l	1		•
repeat)	,			İ	l	1		l ',	
chemokine (C-C motif)	. 6	L31581				-		_	
receptor 7 (CCR7)		L31301		1	ľ	1			
chemokine (C-X3-C)	5	U20350		<b>├</b>	ļ	<u> </u>	1		
receptor 1 (CX3CR1)	. 3	020350	i i	+		1			,
chemokine (C-X-C motif),	5	Lingson		L					
receptor 4 (fusin) (CXCR4)	5	M99293	+	+	+	+	·	+	
chitinase 3-like 1 (cartilage		- COORDS				·			·
glycoprotein-39) (CHI3L1)	2	M80927		+		+		+	
chitinase 3-like 2 (CHI3L2)				Ŀ			·		
	2	U49835		+		+		+	
chlonde channel 1,	1	G18280			_	<del> </del>			· · · · · · · · · · · · · · · · · · ·
skeletal muscle (CLCN1)									- '
chloride channel 6	1	D28475		+	+	_	-		<del></del>
(CLCN6)									. 1
Chloride intracellular		U93205	+	+	+	+	$\vdash$	+	-
channel 1 (CLIC1)				1 1				•	· 1
chondroitin sulfate	5	X15998			+				
proteoglycan 2 (versican)		;			,	1			
(CSPG2)									•
chondroitin sulfate	2	J02814		-	+	├─	_	+	
proteoglycan core protein	, <b>-</b>	]		i	. •	<b>!</b> .		٠,	
chromatin assembly factor	1	Q09028							
1 p48 subunit (CAF-1 P48	•	205020			1	ł			·
subunit) (retinoblastoma	•								
binding protein p48)		*		]					•
(retinoblastoma-binding					٠٠.			. I	
protein 4) (MSI1 protein				[	i			- 1	
homolog)		J. 1						1	·
chromodomain helicase	2	AF006513	·			<b>—</b> -	$\vdash$		
DNA binding protein 1	-	71 000013							
(CHD1)		·	ĺ					. [	. ·
chromodomain helicase		AF054177		$\vdash$		$\vdash$			
DNA binding protein 1-like	•	AF004177	•						l
(CHD1L)			-	ı i					·
chromodomain helicase		A EMMERA							
DNA binding protein 2	1 .	AF006514	В	+	+		+	. I	
(CHD2)								l	l
chromodomois bell				1					<u>;                                    </u>
chromodomain helicase	1	AF006515							
DNA binding protein 3		. [						j	
(CHD3)									
chromodomain helicase	5	X86691	+	+	+	+		+	
DNA binding protein 4									
(CHD4)									

chromosome 1 open reading frame 7 (C1ORF7)	1	AF054176					·		
chromosome 1 specific transcript KIAA0493	1	AB007962							·
chromosome 17 open reading frame 1B	1	AJ008112_	T	+	÷				
(C17ORF1B) chromosome 4 open	1	AF006621	<u> </u>	+	+	+		+	,
reading frame 1 (C4ORF1) chromosome condensation	2	AF060219	<u> </u>	+	+ -	+	_	+	
1-like (CHC1L) chromosome X open	1	Y15164	В	+	+		+	<u> </u>	
reading frame 5 (CXORF5) chromosome-associated	2	AF092564	. В	+	+	-	+	+	
polypeptide C(CAP-C)							Ŀ	<u></u>	
cig5	3	AF026944		<b> </b>				Ŀ	
citrate synthase (CS)	2	AF026941	<u> </u>	<u> </u>			<u> </u>	<u> </u>	
class   major	. 2	AF047042 U31372	В	+	+		+	+	
histocompatibility antigen (HLA-Cw3)	. 2	031372					,		
class I major histocompatibility antigen (HLA-Cw3) (low match)	1	U31372							
clathrin assembly protein lymphoid myeloid leukemia	3	U45976	В	+	+	$\vdash$	-	+	·.
(CALM)				4			Ŀ		
clathrin heavy chain	1	X55878							
clathrin, heavy polypeptide- like 2 (CLTCL2)	1	D21260	-						
clathrin, light polypeptide (Lca) (CLTA) (low match)	1	M20472					[.		
clathrin-	3	D63475		+	+	+	+	+	
associated/assembly/adapt or protein, medium 1 (CLAPM1)					•				
cleavage stimulation factor, 3' pre-RNA, subunit 2 64kD (CSTF2) (non-exact 82%)	1	M85085	*						
cleavage stimulation factor, 3' pre-RNA, subunit 3.	1	U15782	В	+	+	_	+		
77kD (CSTF3) clk3		L29220			+				
clone 23815 (Hs.82845)	1	U90916	В	+				L.	
clone 24592 mRNA	1	D88378		+	+			+ +	·
sequence Clg/MBL/SPA receptor	1	U94333	<b>T</b>		. +	+		*	
C1qR(p) ()	'	094333							·
clusterin (complement lysis inhibitor, SP-40,40,	1	M64722	+	+	+	+	+	+	
sulfated glycoprotein 2, testosterone-repressed prostate message 2.		. ,							
apolipoprotein J) (CLU) CMP-sialic acid transporter	1	D87969	В	+	+		-		
(CMPST)			٠. د		т				
CMRF35	3	X66171			·				
c-myc oncogene containing coxIII		X54629							
coagulation factor II (thrombin) receptor (F2R)	1	M62424		+	+			+	
coagulation factor V (proaccelerin, labile factor) (F5)		M14335		.+		+			
coagulation factor XIII a subunit	3	M21998							
coagulation factor XIII, A1 polypeptide (F13A1)	6	M14354		+	+	+		+	
coated vesicle membrane protein (RNP24)	1	X92098	+	+	+	+	+	+	

			·						
coatomer protein complex, subunit alpha (COPA)	5	U24105		+			+	- 1	
Cofilin 1 (non-muscle)	13	X95404	+	+	+	+	+	- +	high in fetal brain
(CFL1)				<u> </u>		ļ			
cold inducible RNA-binding protein (CIRBP)	7	D78134		+ "	+			+	
cold shock domain protein	3	X95325		+	+	-	├	<del> </del>	
A (CSDA)									
collagen, type IX, alpha 2 (COL9A2)	3	AF019406	В				*		
colony stimulating factor 1	3	X03663		+			+	+	
receptor, formerly McDonough feline sarcoma						l			
viral (v-fms) oncogene				'		1			·
homolog (CSF1R) colony stimulating factor,2.		. 056504						Ŀ	
receptor, beta, low-affinity	. ⊅	M59941	:	1		l	'. ")		\$
(granulocyte-macrophage)				1					
(CSF2RB)				<u> </u>		<u> </u>	Ŀ		
colony stimulating factor 2 receptor, beta, low-affinity	1	M59941		1		l	l		
(granulocyte-macrophage)	ľ	·		1		l			
(CSF2RB) (low match)		V		1	<u> </u>				
colony stimulating factor 3 receptor (granulocyte)	16	X55720		*					
(CSF3R)			· .			1			
complement component 5	1.	M62505	L.	1		· ·			
receptor 1 (C5a ligand) (C5R1)	*			1					
conserved gene amplified	2	AF000152		+	+	+	$\vdash$	+	<del> </del>
in osteosarcoma (OS4)									
COP9 (constitutive photomorphogenic,	2	AF031647		.+	+		:	+	*
Arabidopsis, homolog)		·	1.	].		1	] .		`
subunit 3 (COPS3)				1					
COP9 homolog (HCOP9)	2	U51205	В	+	+	+	+	+	
COPII protein, homolog of s. cerevisiae SEC23p	4	X97064		+	+				
(SEC23A)			-						
copine I (CPNE1)	2	. U83246	В	+	• +		+	_	
copine I (CPNE1) (low	1	U83246		<del>                                     </del>					· · · · · · · · · · · · · · · · · · ·
score) coproporphyrinogen		D16611		ļ	<u> </u>		<u> </u>	<u> </u>	
oxidase (coproporphyria,	•	ווססוו	100	1.	+		+	+	,
harderoporphyria) (CPO)				I					
core-binding factor, beta subunit (CBFB)	1	120298		+					
coronin	22	X89109	T.W	+	+	-	+	-	
coronin (low match)	<del></del>	· U34690	-	1	<u> </u>	-	<u> </u>	├-	
coronin (non-exact, 71%)	1	X89109		<del> </del>	-	-	$\vdash$	-	· · · · · · · · · · · · · · · · · · ·
cot (cancer Osaka thyroid)		D14497	+	+	+	+	<del> </del>	+	
oncogene (COT)	,			'	· ·	·	ŀ		
cryptochrome 1	1	D84657	Ī.	+	1.+			+	
(photolyase-like) (CRY1) CTD (carboxy-terminal	1	AF081287		+	+	+	<u> </u>	+	
domain, RNA polymerase	•	A 001201		1	•		l		
II. polypeptide A)		·		1			1		·
phosphatase, subunit 1 (CTDP1)							'		
C-terminal binding protein	1	U37408	В	+ -	+	_	+		
11 (CTBP1)							<u></u>	<u> </u>	·
C-terminal binding protein 2 (CTBP2)	2	AF016507		+	+	_	+		
CUG triplet repeat, RNA-	3	U63289	<del> </del>	+	+	+		+	
binding protein 1				-	1				'
(CUGBP1) cullin 1 (CUL1)	3	HEOVOA		<del> </del>	<u> </u>	ļ.		<u> </u>	
cullin 3 (CUL3)	2	U58087		+	+	+	<u> </u>	+	
		U58089		+	+	+	L	+	
cut (Drosophila)-like 1 (CCAAT displacement	1	M74099	В	+					
protein) (CUTL1)			1		1		1		
		·	·						<del></del>

cyclin D2 (CCND2)	2	D13639		+	+	T +	_	+	
cyclin D3 (CCND3)	5	M92287	В, Т	<del>- :</del>	+		+	-	
cyclin G1 (CNNG1)		D78341	lymphoma	+	-	<u> </u>	_	+	·
cyclin I	3	D50310	В	<u> </u>	<u> </u>	<u> </u>	+	<u> </u>	
cyclin T2 (CNNT2)	1	AF048732	B, T	В					
cyclin-dependent kinase 2 (CDK2)	. 1	X62071	lymphoma			-		-	
cyclin-dependent kinase inhibitor (p27Kip1)	1	S76986				<del> </del>			
cyclin-dependent kinase inhibitor 1A (p21, Cip1)	. 2	S67388	+	+	+	+	+	+.	
(CDKN1A) CYP2D7-CYP2D6	1	X90926	ļ			<u> </u>			
intergenic region (partial)			ļ.			•			
cystatin B (stefin B) (CSTB)		L03558			+	·	+	+	
cysteine and glycine-rich protein 3 (cardiac LIM protein) (CSRP3)	5	L54057			+				
cytidine deaminase (CDA)	2	L27943					+		
cytochrome b	1	AF042500							
cytochrome b (CYTB) (isolate Aus5)	1 .	AF042518			٠	(1)			
cytochrome b(-245) beta chain N-terminal region (X- linked granulomatous disease gene)	2	X05895							
cytochrome b-245, beta polypeptide (chronic granulomatous disease)	2	X04011	+	;		+		+	
(CYBB) cytochrome C	1	P00001	<u> </u>			<u> </u>			
cytochrome c oxidase	1	U90915	-	+		_	_	+	·
subunit IV (COX4)				Ţ	+	,	+		
cytochromè c oxidase subunit Vb (COX5B)	2	M59250	. 9			<u> </u>	+		
cytochrome c oxidase subunit VII-related protein (COX7RP)	6	AB007618	*	+	+	+		+	
cytokine suppressive anti- inflammatory drug binding protein 1 (p38 MAP kinase) (CSBP1)	. 1	L35263	lymphocyte	+	+		+		
Cytoplaśmic antiproteinase=38 kda intracellular serine	1	S69272	·		+				
proteinase inhibitor									
cytotoxic granule- associated RNA-binding protein p40-TIA-1	1.	S70114							
D123 (D123)	_ 1	D14878	+	+		+	-	+	
D2-2	1	AF019226				-			
D38	1	X74802				-		-	
damage-specific DNA binding protein 1 (127kD) (DDB1)	2	AJ002955	+	+	+	+	+	+	
DCHT (low match)	1	AF017635				-			
DEAD/H (Asp-Glu-Ala- Asp/His) box binding protein 1 (DDXBP1)	1	U78524		.+	+	+	+	+	
DEAD/H (Asp-Glu-Ala- Asp/His) box polypeptide (72KD) (P72)	2	U59321		+.	+		+.	+	÷
DEAD/H (Asp-Glu-Ala- Asp/His) box polypeptide 1 (DDX1)	1	X70649		+	+			+	

2	AB001636	1	T	1	1	T	T .	1.
1					ļ			
2	AB011149	+	+	+	+		+	
-3	U50553	+	+	+	+		+	
37	X15729	+	+		+		+	
1	AF015812						- 22	
,		) 	<u> </u>		ì	ŀ	. '	4.1
2	D17532	+	+			-		
1	D50487	<del>                                     </del>	+	-+	╁	-	+	
3	L13848	+	+	.+	+		. +	7.
				ŀ				
1	AF000985		-	-	—	+-	ļ	
								×
<u> </u>	X83544	+	+	+	+	+	+	
	AF083236		+	+	+		+	
2	AF039136		+	+	+		+	
4	D86964	+	+		+		+	
1		·		+		+	+	
4	L12690	·			+	+	+	
1	X64229	В		+	$\vdash$	+		
4	Z50781	+	+	+	+		+	
3	AF064603	+	+	+	+		+,	
.1								
3 .	AB004574							
2	L77566		+					
	D16440							
			+					· ·
1	AF064771							
1	AF051782	B, monocyte stimulated	+	+		+	+	
1	Y09501	+	+	+	+	+	+	
1	AB004056		+			+	+	
	3 37 1 2 1 2 1 2 4 1 4 1 4 3 1 3 1 1 1 1 1	3 U50553 37 X15729 1 AF015812 2 D17532 1 D50487 3 L13848 1 AF000985 2 X83544 1 AF083236 2 AF039136 4 D86964 1 D15057 4 L12690 1 X64229 4 Z50781 3 AF064603 1 M60527 3 AB004574 2 L77566 3 D16440 3 AF064771 1 AF064771 1 AF051782 1 Y09501	3 U50553 +  37 X15729 +  1 AF015812	3 U50553 + +  37 X15729 + +  1 AF015812  2 D17532 + +  1 D50487 +  3 L13848 + +  1 AF000985 +  2 X83544 + +  1 AF083236 +  2 AF039136 +  4 D86964 + +  1 D15057 +  4 L12690 +  1 X64229 B +  4 Z50781 + +  3 AF064603 + +  1 M60527 +  3 AB004574 +  2 L77566 +  3 D16440 +  3 AF064771 +  1 AF064771 +  1 AF064771 + +	3 U50553 + + + + 1 37 X15729 + + + + + + + + + + + + + + + + + + +	3 U50553 + + + + + + + + + + + + + + + + + +	3 U50553 + + + + + + + 1    1 AF015812	3 U50553 + + + + + + + + + + + + + + + + + +

differentiated Embryo Chondrocyte expressed gene 1 (DEC1) (low match)	1	AB004066							
differentiation antigen	1	L23415		-	-	<del> </del>	┢	$\vdash$	
DiGeorge syndrome critical region gene 2 (DGCR2)		X84076	· · · · ·	+	+	$\vdash$		+	
dihydrolipoamide	2 .	J03620	<u> </u>	+	-	$\vdash$	+	+	
dehydrogenase (E3 component of pyruvate dehydrogenase complex,									
2-oxo-glutarate complex, branched chain keto acid		2				'		.	
dehydrogenase complex) (DLD)						1:		-	
dihydrolipoamide S-	- 1	Y00978	В	+		$\vdash$	+	$\vdash$	
acetyltransferase (E2					١.		1	1	
component of pyruvate dehydrogenase complex) (DLAT)	*								
dihydropyrimidinase-like 2 (DPYSL2)	1	D78013		+	+	-	+	+	
dinG gene	1	Y10571					-	-	<del> </del>
dipthena toxin resistance	3	AF053003	В	+	+		+	+	
protein required for diphthamide biosynthesis (Saccharomyces)-like 2	•	*			÷.				
(DPH2L2) disintegrin-protease (non-	- 1	Y13323				<u> </u>	_	<u> </u>	
exact 72%) DJ-1 protein	2	AF021819	+	+		+		+	<u> </u>
Dmx-like 1 (DMXL1)	1	AJ005821	+	<u> </u>	+	+		-	
DNA (cytosine-5-)- methyltransferase 1 (DNMT1)	3	X63692	T activated, lymphoma	+	À	. ÷	+	+	
DNA fragmentation factor, 40 kD, beta subunit (DFFB)	• 1	AF064019							
DNA fragmentation factor, 45 kD, alpha subunit (DFFA)	2	U91985		+	+ .			+	
DNA mismatch repair protein (hMLH1)	1	U17840				- 7	•	-	
DNA segment on	3	M64241	<u> </u>					<u></u>	
chromosome X (unique) 648 expressed sequence			+ .	+	+	+	+	+	high in many libraries
DNA segment, single copy probe LNS-CAI/LNS-CAII	3	M73547	}	+	+	+		+	
(deleted in polyposis (D5S346)							-		
DNA-damage-inducible transcript 1 (DDIT1) (low match)	1	L24498							7.
DnaJ protein	1	AJ001309		·				<del> </del>	
DnaJ protein	1	AJ001309							
docking protein 2, 56kD (DOK2)	1	AF034970			•	·			
dolichyl- diphosphooligosaccharide- protein glycosyltransferase (DDOST)		D89060	+	+	+	+	+	+	activated T cell
dolichyl-phosphate mannosyltransferase polypeptide 1, catalytic subunit (DPM1)		D86198	Tactivated	+	+		+		
down-regulated by activation (immunoglobulin superfamily) (DORA)	.1	AJ223183	. ( -				+		
down-regulated in adenoma DRA (low match)	. 1	P40879							
D-type cyclin-interacting	1	AF082569	В	<del>  </del>	-		+	+	<u> </u>
protein 1 (DIP1)									

Gual specificity   April   APU23917   APU2											•
Qual specificity		dual specificity phosphatase 1 (DUSP1)	4	X68277	. +	+	+	+	+	+	6
Complex 1-interacting   (dusp11)   (dusp11	•	dual specificity	1	AF023917	+	+	+.	+	<del>                                     </del>	+	· · · · · · · · · · · · · · · · · · ·
phosphatase 3 (vaccinia virus phosphatase VH1- related) (DUSP3)  dual specifical (DUSP6)		complex 1-interacting)	• · ·		\						_
Virus phosphataise VH1- related) (DISP3)  dual specificity phosphatase 6 (DUSP6) Gynacini 1 (p150, Glued (Drosophia) hornizola (Drosophia) hornizola (Drosophia) hornizola (Drosophia) hornizola (Drosophia) hornizola (Drosophia) hornizola (Drosophia) hornizola (Drosophia) hornizola (Drosophia) hornizola (Drosophia) hornizola (Drosophia) hornizola (Drosophia) hornizola (Drosophia) hornizola (Drosophia) hornizola (Drosophia) hornizola (Drosophia) (Dr			1	L05147	<del> </del>	+	+	·	+	+	
phosphatase 6 (DUSP6) dynacin 1 (p150, Glued (Drosophila) homolog) (DYTN1) dynacin 1 (p150, Glued (Drosophila) homolog) (DYTN1) (dw match) dynamin 2 (DNM2) dynamin 3 (DNM2) dynamin 3 (DNM2) dynamin 3 (DNM2) dynamin 3 (DNM2) dynamin 3 (DNM2) dynamin 3 (DNM2) dynamin 3 (DNM2) dynamin 3 (DNM2) dynamin 3 (DNM2) dynamin 3 (DNM2) dynamin 3 (DNM2) dynamin 3 (DNM2) dynamin 3 (DNM2) dynamin 3 (DNM2) dynamin 3 (DNM2) dynamin 3 (DNM2) dynamin 4 (DNM2) dyn		virus phosphatase VH1-		,				<b> </b>			
Gynacin 1 (p150, Glued (0rosophila) homolog) (0rosophila) homolog) (0rosophila) homolog) (1/0rosophila)		6	X93920	+	+	+	+	+	+		
Synactin 1 (p.150, Glued   Circosophia) homology   Circosophia) homology   Circosophia) homology   Circosophia) homology   Circosophia) homology   Circosophia) homology   Circosophia) homology   Circosophia)   Circ		dynactin 1 (p150, Glued (Drosophila) homolog)	3	X98801	,						
Gynamii		dynactin 1 (p150, Glued (Drosophila) homolog)	1	X98801	. ,B :	+	+,			-	
Complex 50 kD subunity   CoTN-50 (non-exact 88%)   Associated 17-like (non-exact, 57%aa)   AF035812   B + + + +   AF035812   B + + +   AF035812   B + + +   AF035812   B + + +   AF035812   B + + +   AF035812   B + + +   AF035812   B + + +   AF035812   B + + +   AF035812   B + + +   AF035812   B + + +   AF035812   B + + +   AF035812   B + + +   AF035812   B + + +   AF035812   B + + +   AF035812   B + + +   AF035812   B + + +   AF035812   B + + +   AF035812   B + +   AF035812   B + +   AF035812   B + +   AF035812   B +   AF		dynamin 2 (DNM2)	<del></del> -	L36983	<del> </del>	-			-		
Complex 50 kD subunity   CoTN-50 (non-exact 88%)   Associated 17-like (non-exact, 57%aa)   AF035812   B + + + +   AF035812   B + + +   AF035812   B + + +   AF035812   B + + +   AF035812   B + + +   AF035812   B + + +   AF035812   B + + +   AF035812   B + + +   AF035812   B + + +   AF035812   B + + +   AF035812   B + + +   AF035812   B + + +   AF035812   B + + +   AF035812   B + + +   AF035812   B + + +   AF035812   B + + +   AF035812   B + + +   AF035812   B + +   AF035812   B + +   AF035812   B + +   AF035812   B +   AF					<del> </del>		<del> </del>		<del></del>	<del> </del>	
polypeptide 17-like (non-exact, 57%aa)   dynein, cyfoplasmic, light   intermediate polypeptide 2 (DNCLI2)   dynein, cyfoplasmic, light   intermediate polypeptide 2 (DNCLI2) (non-exact, 63%)   dynein, cyfoplasmic, light   intermediate polypeptide 2 (DNCLI2) (non-exact, 63%)   dyskeraloss congenita 1, dyskerin (DKC1)   dyskerin (DKC1)   dyskerin (DKC1)   dyskerin (DKC1)   dyskerin (DKC1)   dystonia 1, lorsion   (autosomal dominant)   AF007871   + + + + + + + + + + + + + + + + + +		complex 50 kD subunit) (DCTN-50) (non-exact 88%)	••								
Intermediate polypeptide 2   CIDNCLI2)   Gynein, Cytoplasmic, light intermediate polypeptide 2   CIDNCLI2) (non-exact, 69%)   CIDNCLI2) (non-exact, 69%)   CIDNCLI2) (non-exact, 69%)   CIDNCLI2) (non-exact, 69%)   CIDNCLI2) (non-exact, 69%)   CIDNCLI2) (non-exact, 69%)   CIDNCLI2) (non-exact, 69%)   CIDNCLI2) (non-exact, 69%)   CIDNCLI2) (non-exact, 69%)   CIDNCLI2)   CIDNCL		polypeptide 17-like (non- exact, 57%aa)	· •	X99947			·				
Intermediate polypeptide 2   Intermediate polypeptide 3   Intermediate p		intermediate polypeptide 2	1	AF035812	В	+	. +		·	+	
dyskeralosis congenità 1		dynein, cytoplasmic, light intermediate polypeptide 2 (DNCLI2) (non-exact, 69%)	1	AF035812							
AF007871	٠	dyskeratosis congenita 1, dyskerin (DKC1)	1	U59151	, в	+			Ŧ	+	
Clystrophia myotonica-containing WD repeat motif (DMWD)   Clystrophia myotonica-protein kinase (DMPK)   Clystrophia myotonica-protein kinase (DMPK)   Clystrophia myotonica-protein kinase (DMPK)   Clystrophia (MSCO)		dystonia 1, torsion (autosomal dominant) (DYT1)	1	AF007871	·	+	+	+		+	
Containing WD repeat motif (OMWD)   Containing WD repeat motif (OMWD)   Containing WD repeat motif (OMWD)   Containing WD repeat motif (OMWD)   Containing WD repeat motif (OMWD)   Containing WD repeat motif (OMWD)   Containing WD repeat motif (OMMD)   Containing WD repeat motif (OMDD)   Containing WD repeat motif (	- 1		1	AF022728		+					
Drotein kinase (DMPK)   Drotein kinase (DMPK)   Drotein kinase (DMPK)   Drotein kinase (DMPK)   Drotein kinase (DMD) (low match, 59%aa)   E18-55kDa-associated   Drotein kinase (DMD) (low match, 59%aa)   Drotein kinase (DMD) (low match, 59%aa)   Drotein kinase (DMD) (low match, 59%aa)   Drotein kinase (DMD) (Drotein kinase (DMD) (low match, 59%aa)   Drotein kinase (Drotein kinase (DMD) (low match, 59%aa)   Drotein kinase (Drotein kinase (Dro		containing WD repeat motif (DMWD)	1			+	. +		+	+	
dystrophy, Duchenne and Becker types) (DMD) (low match, 59%aa)     E1B-55kDa-associated protein   AJ007509   W	-1	protein kinase (DMPK)	1	L08835	+	+	+			+	
protein E2F transcription factor 3 [E2F3] E2F transcription factor 4, p107/p130-binding (E2F4) E2F transcription factor 5, p130-binding (E2F5) E74-like factor 1 (ets domain transcription factor) (ELF1) E74-like factor 4 (ets domain transcription factor) (ELF4) E74-like factor		dystrophy, Duchenne and Becker types) (DMD) (low match, 59%aa)	1	X14298							
(E2F3)   E2F transcription factor 4,	- [	protein	1	AJ007509	W	+	+		+	+,	
p107/p130-binding (E2F4) E2F transcription factor 5, p130-binding (E2F5) E74-like factor 1 (ets domain transcription factor) (ELF1) E74-like factor 4 (ets domain transcription factor) (ELF4) E74-like factor 4 (ets domain transcription factor) (ELF4) (E1F4) E74-like factor 4 (ets domain transcription factor) (ELF4) (non-exact, 71%) early development	ı	E2F3)	2			+	+	+	+	+	:
p130-binding (E2F5) E74-like factor 1 (ets domain transcription factor) (ELF1) E74-like factor 4 (ets domain transcription factor) (ELF4) E74-like factor 4 (ets domain transcription factor) (ELF4) E74-like factor 4 (ets domain transcription factor) (ELF4) (non-exact, 71%) early development regulator 2 (homolog of polyhomeotic 2) (EDR2) EBV induced G-protein coupled receptor (EBI2) ecotropic viral integration 3 M60830	-1	0107/p130-binding (E2F4)	1		В	+ -			+		
domain transcription factor) (ELF1) E74-like factor 4 (ets domain transcription factor) (ELF4) (ELF4) E74-like factor 4 (ets domain transcription factor) (ELF4) (non-exact, 71%) early development regulator 2 (homolog of polyhomeotic 2) (EDR2) EBV induced G-protein coupled receptor (EBI2) ecotropic viral integration 3 M60830	1	o130-binding (E2F5)	_		•	+		+		+	
domain transcription factor) (ELF4)  E74-like factor 4 (ets domain transcription factor) (ELF4) (non-exact, 71%) early development regulator 2 (homolog of polyhomeotic 2) (EDR2)  EBV induced G-protein coupled receptor (EBI2) ecotropic viral integration 3 M60830		domain transcription factor)	· · · · · · · · · · · · · · · · · · ·		В		+		+	+	
domain transcription factor) (ELF4) (non-exact, 71%) early development regulator 2 (homolog of polyhomeotic 2) (EDR2) EBV induced G-protein coupled receptor (EBI2) ecotropic viral integration 3 M60830		domain transcription factor)	3	U32645		+	+			+	
early development 4 U89278 + + + + + + + + regulator 2 (homolog of polyhomeotic 2) (EDR2)  EBV induced G-protein 1 L08177 W coupled receptor (EBI2) ecotropic viral integration 3 M60830 + + + +		fomain transcription factor) ELF4) (non-exact, 71%)	1	U32645	·					•	
polyhomeotic 2) (EDR2)  EBV induced G-protein 1 L08177 W  coupled receptor (EBI2)  ecotropic viral integration 3 M60830 + + +	ſ	early development egulator 2 (homolog of	4	U89278	+.	+	+	+		+	
coupled receptor (EBI2)  ecotropic viral integration 3 M60830 + + +	ŀ	BV induced G-protein	1	L08177	w		-	_			·
site 2B (EVI2B)	ŀ	coupled receptor (EBI2)			**						
		ite 2B (EVI2B)	3	IVIOU83U				+			

									•
ectin, galactoside-binding, soluble, 1 (galectin 1) (LGALS1)	1	J04456						+	ř. (
EGF-like-domain, multiple 4 (EGFL4)	1	AB011541	· .						
elF-2-associated p67 homolog	3	U13261	В	+				+	
elastin (supravalvular aortic stenosis, Williams-Beuren syndrome) (ELN) (low match)	1	M24782		+	+				
elav-type RNA-binding protein (ETR-3)	3	U69546					•		
electron-transfer- flavoprotein, alpha	2	J04058		+					
polypeptide (glutaric aciduria II) (ETFA) ELK3, ETS-domain protein	2	Z36715		-	+			+.	
(SRF accessory protein 2) (ELK3)					7	·		•	
elongation factor 1-beta	1 .	L26404		l			- 1		
elongation factor Ts (mitochondrial protein)	1	AF110399							
elongation factor Tu- nuclear encoded mitochondrial	. <b>1</b> ,	X84694						·	
eMDC II protein	1	AJ242015.1							
ems1 sequence (mammary tumor and squamous cell	.1	M98343		+	+		+	+	
carcinoma-associated (p80/85 src substrate) (EMS1)									
endogénous retroviral element HC2	1	Z70664							
endosulfine alpha (ENSA)	7	X99906	T	+					
endothelial differentiation, sphingolipid G-protein- coupled receptor, 1 (EDG1)	2	M31210		+	+	+		+	
endothelial differentiation, sphingolipid G-protein- coupled receptor, 1 (EDG1) (low match 68%)	1	. M31210						Đ	
endothelial monocyte- activating polypeptide (EMAPII)	1	U10117	+	+	+	+		+	
enolase 1, (alpha) (ENO1)	12	M14328	+	+	+	+	*	+	
enolase 2, (gamma, neuronal) (ENO2)	1	X51956	Y.	+					
enolase-alpha	1	D28437							
enoyl Coenzyme A hydratase 1, peroxisomal (ECH1)	2	U16660							
enoyl Coenzyme A hydratase, short chain, 1, mitochondrial (ECHS1)	1	D13900	+	+	+	+	+	+	
ENOYL-COA HYDRATASE, MITOCHONDRIAL PRECURSOR (SHORT CHAIN ENOYL-COA HYDRATASE) (SCEH) (ENOYL-COA HYDRATASE 1) (low match, non-exact 56%)	1	P30084							
epidermal growth factor receptor pathway substrate 15 (EPS15)	2	·U07707	:	+		+		+	

EPIDIDYMAL SECRETORY PROTEIN	2	Q15668	•						;·
E1 PRECURSOR (EPI-1)									.
(HE1) (EPIDIDYMAL SECRETORY PROTEIN							ĺ		·
14.6) (ESP14.6)	•			İ					·
epithelial membrane protein 3 (EM[P3)	-1	U87947.	+	.+	+	+		+	
Epoxide hydrolase 1,	1	L29766					<u> </u>		+ only
microsomal (xenobiotic) (EPHX1)									
ERCC2 (=L47234)	1	X52221				<del>                                     </del>	<del>  .</del>		T
ERF-2	3	U07802	+	-+-	+	+	_	+	high in gall bladder
ERp28 protein	1	X94910	+	+	+	+	$\vdash$	+	
erythrocyte membrane	. ,2	MP1635	-		3 1			<del>  </del>	
protein erythroleukemic cells K562	2	L25343					-		
EST (Hs.189509)	2	U24166						<u> </u>	
estrogen receptor-related	1	L38487				-	-		
protein (hERRa1)		Vaaraa			٠				
ESTs, Highly similar to ADENYLOSUCCINATE SYNTHETASE		X66503	В, Т	+	+				
ESTs, Moderately similar to	1	U28811	+	+	+	+	<del>                                     </del>	+	· · · · · · · · · · · · · · · · · · ·
cysteine-rich fibroblast growth factor receptor	1 1 1								
ET binding factor 1 (SBF1)	1	U93181	+	+				+	
ets domain protein ERF	1	U15655	+	+	+	+	<del>                                     </del>	+	
eukaryotic translation	326	X03558	7	+	+	$\vdash$	$\vdash$	+	
elongation factor 1 alpha 1 (EEF1A1)		·							,
eukaryotic translation elongation factor 1 alpha 1	1	X03558							
(EEF1A1) (low match)						ŀ			
eukaryotic translation elongation factor 1 alpha 1	1	X03558							
(EEF1A1) (low match)	*		•						
eukaryotic translation elongation factor 1 beta 2	5	X60489	+	+	+	+		+	
(EEF1B2)			-				İ		
eukaryotic translation	1	Z21507	+	+	+	+	+	+	
elongation factor 1 delta (guanine nucleotide									
exchange protein) (EEF1D)			·						
eukaryotic translation elongation factor 1 gamma	31	Z11531	-						
(EEF1G)								• ,	
eukaryotic translation elongation factor 2 (EEF2)	2	X51466		+				+	
eukaryotic translation	1	J02645				┝	-		
initiation factor 2, subunit 1									
(alpha, 35kD) (EIF2S1) eukaryotic translation	1	M29536				$\vdash$		<u> </u>	
initiation factor 2, subunit 2	•								
(beta, 38kD ) (EIF2S2) eukaryotic translation	3	L19161		+	+	<u> </u>		<u> </u>	
initiation factor 2, subunit 3 (gamma, 52kD) (EIF2S3)		2.0.0							· .
eukaryotic translation	2	U78311		$\vdash$			-	-	_ ·
initiation factor 3, subunit			·						
10 (theta, 150/170kD) (EIF3S10)			•						·.
eukaryotic translation	3	U36764	+	+	+	+	+	+	high in white blood
initiation factor 3, subunit 2 (beta, 36kD) (EIF3S2)	!	·							cells
eukaryotic translation	6	U54559	+	+	+	+	-	+	high in spleen
initiation factor 3, subunit 3									· '
(gamma, 40kD) (EIF3S3) eukaryotic translation	9	AF020833		+	+	+		+	
initiation factor 3, subunit 4		02000							
(delta, 44kD) (EIF3S4)		·		ـــا		L			L

								I.	C1/CA00/00005
eukaryotic translation initiation factor 3, subunit 6 (48kD) (EIF3S6)	4	U94175	+	+.	+	+	-	+	high in bladder
eukaryotic translation initiation factor 3, subunit 6 (EIF3S6)	1	U62962		+	+	+		+	Highly represented (1.4833 pct) in library 36 human gall bladder
eukaryotic translation initiation factor 3, subunit 7 (zeta, 66/67kD) (EIF3S7)	3	U54558	+	+	+	+		+	
eukaryotic translation initiation factor 3, subunit 8, 110KD (EIF3S8)	5	U46025	+	+	+	+.	+	+	high in testis
eukaryotic translation initiation factor 4 gamma, 1 (EIF4G)	1	AF012088							
eukaryotic translation initiation factor 4 gamma, 1 (EIF4G) (low match)	1	AF012088							
eukaryotic translation initiation factor 4 gamma, 1 (EIF4G1)	2	D12686					,		
eukaryotic translation initiation factor 4 gamma, 2 (EIF4G2)	6	U73824	+	+	+	+	+	+	
eukaryotic translation initiation factor 4 gamma, 2 (EIFG2)	2	U76111	+	+	+ .	.+	+	+	,
eukaryotic translation initiation factor 4A, isoform 1 (EIF4A1)	29	D13748							
eukaryotic translation initiation factor 4A, isoform 2 (EIF4A2)	11	D30655	+	+	+	+	+	+	
eukaryotic translation initiation factor 4B (EIF4B) eukaryotic translation	18	X55733 P06730	+	+	+	+		+	
initiation factor 4E (EIF4E) Eukaryotic translation	3	L36056	Т.В	+		- :		+	
initiation factor 4E binding protein 2 (EIF4EBP2)			1, 6	Ť			+	Ť	
eukaryotic translation initiation factor 4H (EIF4H)	2	Q15056			•				
eukaryotic translation initiation factor 5 (EIF5)	2	U49436	+	+	+	+	+	+	
eukaryotic translation termination factor 1 (ETF1)	2	U90176	+,	+	+	+		+	
EV12 protein	1	M55266		+					
Ewing sarcoma breakpoint region 1 (EWSR1)		X66899	+	+	+	+		+	
EWS/FLI1 activated transcript 2 homolog (EAT-2)	2	AF020264							
EWS-E1A-F chimeric protein	1	U35622							
excision repair cross- complementing rodent repair deficiency,	1	M28650	+	+	+.	+		+	
complementation group 1 (includes overlapping antisense sequence) (ERCC1)		,	·				- 1		*
excision repair cross- complementing rodent repair deficiency,	1	X69978		+	+	+.		+	
complementation group 5 (xeroderma pigmentosum, complementation group G (Cockayne syndrome)) (ERCC5)									
exostoses (multiple)-like 3 (EXTL3)	1	AF001690		+	+	+		+	
F11	1	X77744				+			· · · · · · · · · · · · · · · · · · ·
								1	

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· · · · · · · · · · · · · · · · · · ·		9			·		·	
								·
	X99226	+	+	+	.+.			
2	U05040	+		+			+	
1	J05 <b>262</b>	+	•	+	*		+	
2	X69141	+	+	+	+	+	+	
2	L00635		+	. +				
	AF044583							
·			·	·				
	- 157.75	*	*		*	•	+	
							·	
1	M33195	+	+	+	+		•	
2	X04772	+	+		·			
6	M31932	+	+	+	+	+	+	
1	X62572	+	+	+	+	+	+	
	X07934	+	. +	+	+		+	
0			+	+	+	+	+	high in many libraries
							_	
	·		(6)					
3	A00282							
2 .	X96670	+ .	+	+	+		+	
9	Y09188							·
. 4	M11146	+	+	+	+	+	+	
1	Y09232						Ŀ	
			<u> </u>			<u> </u>	_	
						_	_	
1		· ·	<u> </u>	_		Ļ	<u> </u>	
	£00001			L	· •	L		
	1 2 2 1 1 1 4 1 1 1 1 2 2 3 3 1 2 2 9 4	2 Z83095 1 X99226 2 U05040 1 J05262 2 X69141 2 L00635 1 AF044583 1 U70667 4 D10040 1 X54150 1 M33195 2 X04772 6 M31932 1 X62572 34 X07934 3 U12255 1 Z13983 2 M90746 3 X06292 2 X96670 9 Y09188 4 M11146 1 Y09232 2 U05237 1 M34024 1 X56597	2	2	2	2	2	2

			_						
fibroblast growth factor	1	M35718	+	+.	+	+	+	+	**
receptor 2 (bacteria- expressed kinase,				1	'			٠.	
keratinocyte growth factor				1			1	i	
receptor, craniofacial				1		١.	ŀ		
dysostosis 1, Crouzon								1	
syndrome) syndrome,				1 .				l	
Pfeiffer syndrome,	· .								
Jackson-Weiss) (FGFR2)		· •							
ficolin (collagen/fibrinogen	19	D83920		Ī		+		+	
domain-containing) 1 (FCN1)	l .		İ				ŀ		<b>'</b>
filamin A, alpha (actin-		VERTAR	·				ļ	<u> </u>	·
binding protein-280)	2	X53416				· .	1		
(FLNA)	ļ		į				l		
filamin B, beta (actin-	1	AF043045	<del></del>	+	+	_	14	├-	<del>                                     </del>
binding protein-278)		/ 11 0 100 10		1			. `		
(FLNB)				i .	,		1		
Finkel-Biskis-Reilly murine	2	X65923	+	+	+	+	+	+	Highly represented in
sarcoma virus (FBR-MuSV)				1 .					intraepithelial
ubiquitously expressed (fox								ŀ	neoplasia and
derived); ribosomal protein S30 (FAU)		1			•			ļ	invasive prostate
FK-506 binding protein	1	Menann	<del> </del>	<b> </b>	اـــــــــــــــــــــــــــــــــــــ	<u> </u>	<u> </u>	ļ.,	tumor
	i	M80199	+	+	+	+	<u>L.</u>	+	, , , , , , , , , , , , , , , , , , , ,
FK506-binding protein 1A	2	M34539	}						
(12kD) (FKBP1A)	Ļ <u>,</u>	100 100		L					
FK506-binding protein 1B (12.6 kD) (FKBP1B)	į · 1	M92423		+		+		+	
FK506-binding protein 5	4	U71321	<del></del>	<b> </b>	اـــــــا	<u> </u>	<u> </u>	<u> </u>	<u> </u>
(FKBP5)	"	0/1321	1 .	+	+	+		+	
Flightless I (Drosophila)	3	U80184	<del> </del>	+			<del>  -</del>	<del></del>	<u> </u>
homolog (FLII)									,
Flightless (Drosophila)	. 1	U80184	<del>                                     </del>	$\vdash$			<del> </del>	<del>ا</del>	
homolog (FLII) (low match)		333.0						ľ	
FLN29 (FLN29)	. 2	AB007447	<u> </u>	+		+	_	+	<del></del>
flotillin 2 (FLOT2)	5	M60922	+	╀	+	+	+	+	<del>                                     </del>
folate receptor 2 (fetal)		1	<del>                                     </del>	L		1	Ļ		
(FOLR2)	1	AF000380	1	+	+	+		+	
forkhead (Drosophila)	1	AF032886	<del></del>	+		+	<b> </b>	+	
Ihomolog	•	. ~1 002000		*		•		<b>T</b>	
(rhabdomyosarcoma) like 1	1			1					
(FKHRL1)			!	1	٠.			٠	·
Formyl peptide receptor 1.	. 9	M60627	+	+	+	+		+	
(FPR1)									
formyl peptide receptor-like	1	M84562							Found only in
1 (FPRL1)				1 1				i	libraries from
formyl peptide receptor-like	1	Modeen		lacksquare			$\sqcup$		placenta
1 (FPRL1) (low score)	'	M84562	1						•
fragile X mental retardation	1	L29074		+		+		+	
1 (FMR1)		LZ80/4	*		l	<b>T</b>		•	
fragile X mental	1	U25165	+	+	-+-	+		-	
retardation, autosomal	·	220.00	ĺ		``'	•			
homolog 1 (FXR1)	,				1				
Friend leukemia virus	3	M93255	+	+				_	
integration 1 (FLI1)			<u> </u>		_ · [	.			
fructose-bisphosphatase 1	1	D26054				+		+	
(FBP1)				<u> </u>					
FSHD-associated repeat DNA, proximal region	1	U85056				. ]			
fucose-1-phosphate	<del>                                     </del>	VEVIATA		١١			$\Box$		
guanylyltransferase	1	AF017445	•	+	+	+	.		
(FPGT)	•			]·					
full length insert cDNA	1	AF086122		╁╼┤			$\vdash\vdash\vdash$	<del></del>	· · · · · · · · · · · · · · · · · · ·
clone ZA78A09		500122		·	l				
full length insert cDNA	1	AF075061		<del>                                     </del>		$\dashv$	┝┷┥		
YP07G10			• •						
fumarate hydratase (FH)	1	U593 <b>09</b>		+	-+-	+	$\vdash$	+	
FUS (low match)	1	X99006		<del>                                     </del>					
FYN-binding protein (FYB-				<del>⊢</del>					
120/130) (FYB)	16	U93049		+	l	+			
[120/100] (1.10)	i .			ıl	ı	- 1			

G alpha interacting protein	1	X91809	<del>,</del>	1		т —			· · · · · · · · · · · · · · · · · · ·
(GAIP) (low score)			0						
G protein beta subunit-like protein 12.3	2	D28398							·
G protein-coupled receptor 64 (HE6) (non-exact 59%)	1	X81892				+			
G protein-coupled receptor kinase 6 (GPRK6)	2	L16862	+	.+	+			+.	
G1 to S phase transition 1 (GSPT1)	2	X17644		+	+	+	+	+	
GA-binding protein transcription factor, beta	1	D13316		+-	+	+	+.	+	
subunit 2 (47kD) (GABPB2) galactose-1-phosphate	2	M60091	·	ļ		_		_	, ,
uridylyltransferase (GALT)	· .								
galaciosidase, beta 1 (GLB1)	3	M27508		+			+	+	
galactosyltransferase (=X13223 N-		M13701							
acetylglucosamide-(beta 1- 4)-galactosyltransferase)	·		-)(-						
galectin-9 isoform	1	AB006782	+			+		+	<u> </u>
gamma2-adaptin (G2AD)	1	AF068706	+	+		+		+	
gamma-actin	2	M37130							
gamma-aminobutyric acid	2	AJ012187		+	+	_	1	+	
(GABA) B receptor 1 (GABBR1)					·	,			
GATA-binding protein 2 (GATA2)		M68891				+		+	
GATA-binding protein 3 (GATA3)	1	M69106	0		+	+		+	
GCN5 (general control of amino-acid synthesis,	. 3	D64007	+	+	+	+		+.	
yeast, homolog)-like 1 (GCN5L1)							•		
GDP dissociation inhibitor 1 (GDI1)	1	D45021	+	+	+	+		+	high in adult brain
GDP dissociation inhibitor 2 (GCI2)	4	Y13286							
GDS-related protein (HKE1.5)	.4	U68142	+	+	+	+		+	
gelsolin (amyloidosis, Finnish type) (GSN)	3	X04412		+	+	+	+	+	
general transcription factor II, I (GTF2I)	4	Y14946	+	+	+	+	+	+	
general transcription factor	1 -	AF038968	+	+	+	+	+	+	high in fetal brain
(GTF2IP1)									
general transcription factor IIF, polypeptide 1 (74kD	4	X64037	* +	+	+	+		+	
subunit) (GTF2F1)		Z30093	<del>                                     </del>	igsquare	•				
IIH, polypeptide 3 (34kD subunit) (GTF2H3)	4	230093	В, І						
general transcription factor	3	Y07595		+	-	+		+	
IIH, polypeptide 4 (52kD subunit) (GTF2H4)									
general transcription factor IIIA (GTF3A)	1	U14134	+	+		+		+	
general transcription factor IIIC, polypeptide 1 (alpha	1	U02619		+ .	-	+			
subunit, 220kD) (GTF3C1)									
general transcription factor IIIC, polypeptide 2 (beta subunit, 110kD) (GTF3C2)	- 3	D13636	+ .	+	+	+	+	+	
germline immunoglobulin	1	L06612		<del>                                     </del>					
heavy chain (IGHV@) germline immunoglobulin	1	X92236		<b>  </b>					
heavy chain, variabl region germline immunoglobulin									
heavy chain, variable region, (21-2)	1	X92343							
region, (21-2)	Ļl					لــــا			<b>_</b>

									C1/CA00/00003
GLE1 (yeast homolog)-like, RNA export mediator (GLE1L)	1	AF058922		+.	. * .				
glia maturation factor, beta (GMFB)	1	AB001106	+	+		+		+	
glioma-associated oncogene homolog (zinc finger protein) (GLI)	1	X07384							
glioma-associated oncogene homolog (zinc finger protein) (GLI) (low	1	X07384							
score)	<u> </u>	1,00540		<u> </u>					
glucocorticoid receptor	1	V00516 M32284	`	<u> </u>		<u> </u>	<u> </u>	Ŀ	
(=M69104)			18						
glucocorticoid receptor (GRL)	2	U80947	+	+	+	+		+	
glucos phosphate isomerase (CONTAINS LARGE REPEAT)	1	L09105							
glucosamine (N-acetyl)-6- sulfatase (Sanfilippo disease IIID) (GNS)	1	Z12173	+						7
glucosamine (N-acetyl)-6- sulfatase (Sanfilippo disease IIID) (GNS) (non-	1	Z12173							
glucose transporter-like	1.	M20681		+	+	+	+	+	
glucose transporter-like	1	M20681				•			
protein-III (GLUT3) (low match)		,			•				
glucosidase, alpha; acid (Pompe disease, glycogen storage disease type II) (GAA)	1	Y00839	+	+		+		+	
glucosidase, beta; acid (includes	1	K02920	+	+	+	+.	-	+	
glucosylceramidase) (GBA) glutamate dehydrogenase 1 (GLUD1)	. 1	M20867		+	+	+	+	+	
glutamate-ammonia ligase	12	X59834	+	+	+.	+		+	
(glutamine synthase) (GLUL)									
glutamate-ammonia ligase (glutamine synthase) (GLUL) (low score)	1	Y00387							
glutamate-cysteine ligase (gamma-glutamylcysteine synthetase), catalytic (72.8kD) (GLCLC)	1	M90656	*			+			
glutamine cyclotransferase	1	X71125		+	+				·
glutamine-fructose-6- phosphate transaminase 1 (GFPT1)	1	M90516		+	·	+			
glutaminyl-tRNA synthetase	1	X72396			·				
giutaminyl-tRNA synthetase (QARS)	6	X76013	+	+	+	+		+	
glutamyl-prolyl-tRNA synthetase (EPRS)	1	X54326			1	_			
glutathione peroxidase 1 (GPX1)	2	M21304	. +	+	+	+	+	+	
glutathione peroxidase 4 (phospholipid hydroperoxidase) (GPX4)	1	X71973	+	+	+	+		+	
glutathione S-transferase pi (GSTP1)	1	U30897		+	+	+	+	+	
glutathione S-transferase subunit 13 homolog	. 1	AF070657				-	$\dashv$		·
glyceraldehyde-3- phosphate dehydrogenase (GAPD)	12	J02642					+		

glycogenin (GYG)	1	T U31525	<del>†                                 </del>	T+	1 +	1 +	<del></del>	+	·
glycophorin C (Gerbich	1	X12496	<del>                                     </del>	+	+	+	┼	+	
blood group) (GYPC) glycoprotein M68 (GPM6B)	1	U45955	<del>                                     </del>	+	+	┼	<u> </u>	<u> </u>	``
glycyl-tRNA synthetase (GARS)	1	U09587		+	+	+	<del>                                     </del>	+	
glyoxalase I (lactoyl glutathione lyase) (GLYI)	1	L07837	. +	+	+	+	$\vdash$	+	
golgi autoantigen, golgin subfamily a, 1 (GOLGA1)	1	U51587		+	<del> </del>	+	$\vdash$	<del> </del>	
golgi autoantigen, golgin subfamily a, 2 (GOLGA2) (non-exact, 70%)	1	L06147							
golgi autoantigen, golgin subfamily a, 4 (GOLGA4)	1	. U31906				<u>†                                    </u>		H	· · · · · · · · · · · · · · · · · · ·
yo.g. autoantigeri, golgin subfamily b, macrogolgin (with transmembrane signal), 1 (GOLGB1)	1	X75304	1	+	+	+		+	
gp25L2 protein	4	X90872		┼		╄	-	┝	ļ
grancalcin	8	M81637	<del> </del>	+	+	+	-	$\vdash$	<del> </del>
granulin (GRN)	16	X62320	+	+	+	+	<del>  .</del>	+	<del> </del>
granulin (GRN) (low match)	1	X62320	<del>                                     </del>	+		<del>i</del>	<u> </u>	<u>ٺ</u>	
Granulysin (NKG5)	5	M85276		-	-	-	-	+	
granzyme A (granzyme 1,	1	M18737	+	+	-+	+		+	
cytotoxic T-lymphocyte- associated serine esterase (3) (GZMA)							i		
GRB2-related adaptor protein (GRAP)	1	U52518	Tonly	<u> </u>		$\vdash$			
Grb2-related adaptor protein 2 (GRAP2)	. 1	AF090456	T				+	<u> </u>	,
GRO1 oncogene (melanoma growth stimulating activity, alpha) (GRO1)	1.	X54489				+		+	
growth arrest and DNA- damage-inducible gene (GADD153)	1	S40706							,
growth arrest-specific 7 (GAS7)	4	AB007854		+	+				
growth factor receptor- bound protein 2 (GRB2)	1	X62852	В	+			+	+	
GS1 (protein of unknown function)	1	M86934		+	+	+			
GS3955	4	D87119		+	+	+		+	
GTP binding protein 1 (GTPBP1)	1	U87964	*	+	+	+			
GTP binding protein similar to S. cerevisiae HBS1 (HBS1).	1	U87791		+	+	+		+	
GTPase activating protein- like (GAPL)	1	AB011110		+	+	+		+	high fetal brain
GTP-binding protein (low match)	1	Z49068			_				
GTP-binding protein G(K), alpha subunit (=G(I) ALPHA-3)(=GTP-binding regulatory protein Gi alpha- 3 chain)	1	P08754							
Gu protein (GURDB)	2	U41387	+		+	+		+	
guanine nucleotide binding protein	1	,					-		
guanine nucleotide binding protein (G protein), alpha inhibiting activity polypeptide 2 (GNAI2)	4	J03004	+ ,	+	+	+		+	

guanine nucleotide binding	7	M20597	+	1 +	1 +	T +	T-	1 +	6,
protein (G protein), alpha	į.					1		1	
inhibiting activity					l		1	1 .	
polypeptide 3 (GNAI3)		i			1	1	١.	1	1.
guanine nucleotide binding	2	V07400	<del></del>		<b>!</b>	1	ļ.,		
guarine nucleotide binding	2.	X04409	В, Т	+	1	1	+	+	
protein (G protein), alpha	İ			1 .	1	1	Į	l	1 *
stimulating activity	l			1		1	i .	1	
polypeptide 1 (GNAS1)				1	ł	1		1	
guanine nucleotide binding		Z18859		<del>- </del>		+		+	
protein (G protein), alpha		210000		1.					
transducing activity				1		1	1	1	1
nationality activity				1	1	1 .	1	ĺ	İ
polypeptide 2 (GNAT2)				ļ	1	1			1 .
guanine nucleotide binding	2	AF017656		+	+	+		+	
protein (G protein), beta 5				1		.	1		
(GNB5)`						1	1		1
guanine nucleotide binding	5.	M36430		<del> </del>	<u> </u>	٠.	ļ.,	۰.	·
protein (G protein), beta	J. J.	17130430	+	+	+	+	+	+	
protein (G protein), beta				1			ł	1	
polypeptide 1 (GNB1)				1	1	l l	1	1	1 .
guanine nucleotide binding	2	AF011496		+	+	+.	$\vdash$		·
protein (G protein), q				1	1	1	Į.	l	
polypeptide (GNAQ)		· .		1			l .	١.	
guanine nucleotide binding		LOFOOF					<u> </u>	<u> </u>	<u> </u>
gratine nucleotide binding	1	L25665	+	+	+	+	1 -	+	•
protein-like 1 (GNL1)	<u> </u>			1	1	1	1	1	1
guanine nucleotide	1	L13857	+	+	+	+			<del>                                     </del>
exchange factor				1			l		•
guanine nucleotide	1	X15610	+	+	-	<b>+</b> -	$\vdash$	<del>├ .</del>	<u> </u>
regulatory factor (LFP40)	'	`V1901ñ'	+	+	+ -	+	1	+	1 .
				<u> </u>	L				<u> </u>
guanine nucleotide	1 .	U72206	+	+	+	+		+	
regulatory factor (LFP40)				1	l			l	1
GUANINE NUCLEOTIDE-	1	P25388		+	<del></del>	$\vdash$	-	<del></del>	<del> </del>
BINDING PROTEIN BETA	. '			1	١.	1	ł	i	,
SUBUNIT-LIKE PROTEIN	i 'l	9		1	· .	l	1	l	· .
	ĺ	;		1		1	1	5	
12.3 (P205) (RECEPTOR					1	ŀ	ļ		1
OF ACTIVATED PROTEIN			•	1			·	ł	
KINASE C 1) (RACK1)				1		1	1	[	2_
GUANINE-	1	U10860		+	+	$\vdash$	$\vdash$	<del>                                     </del>	<del>                                     </del>
MONOPHOSPHATE			•	1	+	l	l		1
SYNTHETASE (GMPS)				1	l.	8	l	l	1.
guanosine monophosphate		L (MATTER	<u> </u>	1					
guariosine monoprosphate	1	M24470		1		l -		_	
reductase (GMPR) (non-		·	•	1			l	•	1
exact, 72%)				] .			1	l	
guanosine-diphosphatase	1	AF016032		1		-	<del>-</del>	├─	
like protein	•	/ J							
guanylate binding protein	2	LAREE AN		+		<b>.</b>		<b>—</b>	<del></del>
		M55542	•	+	+	+	+	+	
1, interferon-inducible,		ļ		1		ı		i	1
67kD (GBP1)			_	1 .					J.
guanylate binding protein	6	M55543	+	+	+	+		+	
2. interferon-inducible	-		•	'	•	'		Ι΄.	1
(GBP2)		ļ		]	-	·		l	1 .
H2A histone family,								L	<u></u>
	1	Z83742	•		-				
member C (H2AFC)							'		1 /
H2A histone family,	2	AF041483	+	+	+	+	_	+	
Imember Y (H2AY)	_		-		•	i i			
H2B histone family,	2	. 790707	<del></del>	1		احجا	اـــــــــــــــــــــــــــــــــــــ	<u> </u>	
member L (H2BFL)	2	Z80783	. +	+	+	+	+	+	high in adrenal gland
				<u>∟</u> i	-				tumor
h2-calponin	1	D86059				$\vdash$			
						اا		<u> </u>	ļ
		L DOOD 2		_				+	ı <del></del>
H-2K binding factor-2	1	L08904		+	+	+		7	
H-2K binding factor-2				+	+	+		_	
H-2K binding factor-2 H3 histone family, member	1	L08904 Z83735		+	+	+		_	
H-2K binding factor-2 H3 histone family, member K (H3FK)	1	Z83735							
H-2K binding factor-2 H3 histone family, member K (H3FK) H3 histone, family 3A			+	+	+	+		+	high in ovary
H-2K binding factor-2 H3 histone family, member K (H3FK) H3 histone, family 3A (H3F3A)	7	Z83735 M11353	+						high in ovary
H-2K binding factor-2 H3 histone family, member K (H3FK) H3 histone, family 3A (H3F3A) H3 histone, family 3B	1	Z83735	+				-	+	
H-2K binding factor-2 H3 histone family, member K (H3FK) H3 histone, family 3A (H3F3A)	7	Z83735 M11353		+	+	+		+	high in endothelial
H-2K binding factor-2 H3 histone family, member K (H3FK) H3 histone, family 3A (H3F3A) H3 histone, family 3B (H3.3B) (H3F3B)	1 7 15	Z83735 M11353 Z48950		+	+	+		+	
H-2K binding factor-2 H3 histone family, member K (H3FK) H3 histone, family 3A (H3F3A) H3 histone, family 3B (H3.3B) (H3F3B)	7	Z83735 M11353 Z48950 U68494		+	+	+	+	+	high in endothelial
H-2K binding factor-2 H3 histone family, member K (H3FK) H3 histone, family 3A (H3F3A) H3 histone, family 3B (H3.3B) (H3F3B)	1 7 15 1	Z83735 M11353 Z48950 U68494		+ +	+ +	+		+	high in endothelial
H-2K binding factor-2 H3 histone family, member K (H3FK) H3 histone, family 3A (H3F3A) H3 histone, family 3B (H3.3B) (H3F3B) hbc647 heat shock 27kD protein 1	1 7 15	Z83735 M11353 Z48950		+	+	+	+ +	+	high in endothelial
H-2K binding factor-2 H3 histone family, member K (H3FK) H3 histone, family 3A (H3F3A) H3 histone, family 3B (H3.3B) (H3F3B) hbc647 heat shock 27kD protein 1 (HSPB1)	1 7 15 1	Z83735 M11353 Z48950 U68494 U12404	+	+ + + +	+ + +	+ +	+.	+ + +	high in endothelial cells
H-2K binding factor-2 H3 histone family, member K (H3FK) H3 histone, family 3A (H3F3A) H3 histone, family 3B (H3.3B) (H3F3B) hbc647 heat shock 27kD protein 1 (HSPB1) heat shock 40kD protein 1	1 7 15 1	Z83735 M11353 Z48950 U68494		+ +	+ +	+		+	high in endothelial cells
H-2K binding factor-2 H3 histone family, member K (H3FK) H3 histone, family 3A (H3F3A) H3 histone, family 3B (H3.3B) (H3F3B) hbc647 heat shock 27kD protein 1 (HSPB1) heat shock 40kD protein 1 (HSPF1)	1 7 15 1 1	Z83735 M11353 Z48950 U68494 U12404 D85429	+	+ + + +	+ + +	+ +	+.	+ + +	high in endothelial cells
H-2K binding factor-2 H3 histone family, member K (H3FK) H3 histone, family 3A (H3F3A) H3 histone, family 3B (H3.3B) (H3F3B) hbc647 heat shock 27kD protein 1 (HSPB1) heat shock 40kD protein 1 (HSPF1) heat shock 60kD protein 1	1 7 15 1	Z83735 M11353 Z48950 U68494 U12404	+	+ + + +	+ + +	+ +	+.	+ + +	high in endothelial cells
H-2K binding factor-2 H3 histone family, member K (H3FK) H3 histone, family 3A (H3F3A) H3 histone, family 3B (H3.3B) (H3F3B) hbc647 heat shock 27kD protein 1 (HSPB1) heat shock 40kD protein 1 (HSPF1) heat shock 60kD protein 1 (chaperonin) (HSPD1)	1 7 15 1 1	Z83735 M11353 Z48950 U68494 U12404 D85429	+	+ + + + + +	+ + + +	+ + +	+:	+ + + +	high in endothelial cells
H-2K binding factor-2 H3 histone family, member K (H3FK) H3 histone, family 3A (H3F3A) H3 histone, family 3B (H3.3B) (H3F3B) hbc647 heat shock 27kD protein 1 (HSPB1) heat shock 40kD protein 1 (HSPF1) heat shock 60kD protein 1 (chaperonin) (HSPD1)	1 7 15 1 1 4 3	Z83735 M11353 Z48950 U68494 U12404 D85429 M22382	+	+ + + + + +	+ + + + + +	+ + + + +	+	+ + + +	high in endothelial cells high in testis
H-2K binding factor-2 H3 histone family, member K (H3FK) H3 histone, family 3A (H3F3A) H3 histone, family 3B (H3.3B) (H3F3B) hbc647 heat shock 27kD protein 1 (HSPB1) heat shock 40kD protein 1 (HSPF1) heat shock 60kD protein 1 (chaperonin) (HSPD1) heat shock 70kD protein 1	1 7 15 1 1	Z83735 M11353 Z48950 U68494 U12404 D85429	+	+ + + + + +	+ + + +	+ + +	+:	+ + + +	high in endothelial cells high in testis high in activated T
H-2K binding factor-2 H3 histone family, member K (H3FK) H3 histone, family 3A (H3F3A) H3 histone, family 3B (H3.3B) (H3F3B) hbc647 heat shock 27kD protein 1 (HSPB1) heat shock 40kD protein 1 (HSPF1) heat shock 60kD protein 1 (chaperonin) (HSPD1)	1 7 15 1 1 4 3	Z83735 M11353 Z48950 U68494 U12404 D85429 M22382	+	+ + + + + +	+ + + + + +	+ + + + +	+	+ + + +	high in endothelial cells high in testis

			·						
heat shock 70kD protein 5 (glucose-regulated protein, 78kD) (HSPA5)	13	X87949		+	+		+		9
heat shock 70kD protein 6 (HSP70B') (HSPA6)	4	X51757	+	+	+			<u> </u>	
heat shock 70kD protein 9B (mortalin-2) (HSPA9B)	2	L15189		+	+	+	+	+	•
HEAT SHOCK COGNATE 71 KD PROTEIN	1	P11142							
heat shock factor binding protein 1 (HSBP1)	2	AF068754				1			
heat shock protein 90	13	M27024	. +	+	+	+	+	+	high in many libraries
heat shock protein, DNAJ- like 2 (HSJ2)	1	D13388		+	+		+	+	
Hect (homologous to the E6-AP (UBE3A) carboxy!	1	U50078	,	+-	+	+			ł:
terminus) domain and RCC1 (CHC1)-like domain (RLD) 1 (HERC1)									
hect domain and RLD 2 (HERC2)	1	AB002391	+	+	+	+		+	
helicase-like protein (HLP)	1	X98378	. +	+		+		+	
helix-loop-helix protein HE47 (E2A)	1	M65214						+	
hematopoietic cell-specific Lyn substrate 1 (HCLS1)	18	X16663	+		+	+		.+	
heme oxygenase (decycling) 1 (HMOX1)		X06985		+	•	+	+	+	
HEMOGLOBIN ALPHA	1	P19015							
hemoglobin beta (beta globin)	5	AF117710					:		· .
hemoglobin, alpha 1 (HBA1)	301	V00491	-		+		+	+	
hemoglobin, alpha 1 (HBA1) (low match)	1	V00491							
hemoglobin, alpha 1 (low match)	1 .	V00493							
hemoglobin, alpha 1 (non- exact, 76%)	. 1	J00153							
hemoglobin, alpha 1 (non- exact, 82%)	1	V00493							
hemoglobin, beta (HBB)	129	V00497	+	+	+	+	+	+	high in many libraries
hemoglobin, beta (HBB) (low match)	1	V00497							
hemoglobin, beta (HBB) (low match)	1	L48220							
hemokine (C-X-C motif), receptor 4 (fusin) (CXCR4)	1	D10924	+	+	+	+		+	141
hemopoietic cell kinase (HCK)	5	M16591				+		+	
hepatitis C-associated microtubular aggregate protein p44	2	D28908							
hepatoma-derived growth	1	D16431	+	+	+	+		+	
Hermansky-Pudlak syndrome (HPS)	. 2	U65676					-		
HERV-E integrase (non- lexact 76%aa)	. 1.	AF026246							
heterogeneous nuclear protein similar to rat helix destabilizing protein (FBRNP)	2	S63912	· ·	+	+	+		+	·
heterogeneous nuclear ribonucleoprotein (C1/C2) (HNRPC)	4	M16342							
heterogeneous nuclear ribonucleoprotein A/B (HNRPAB)	1	M65028	+	+	+	+	+	+	

heterogeneous nuclear ribonucleoprotein A1 (HNRPA1)	20	X12671	. +	+	*	+.	+		High in alveolar rhabdomyosarcoma
heterogeneous nuclear ribonucleoprotein A2/B1 (HNRPA2B1)	3	M29064	+	+	+	+	+	+	High in activated T cell, fetal brain
neterogeneous nuclear ribonucleoprotein D (hnRNP D)	2	D55673	+	+	+	+	+	+	
heterogeneous nuclear ribonucleoprotein D-like (HNRPDL)	5	D89092	+	+	+	+	+	+	
heterogeneous nuclear ribonucleoprotein F (HNRPF)	· ··1·	L28010	+	+	+	+		+	
heterogeneous nuclear ribonucleoprotein F (HNRPF) (83%)	. :	L28010							
heterogeneous nuclear ribonucleoprotein G (HNRPG)		Z23064		+	+	+	,	+	
heterogeneous nuclear ribonucleoprotein H (HNRPH) (FTP-3)	3	P55795		_	·		,		
heterogeneous nuclear ribonucleoprotein H (HNRPH) (low match)	1.	P31943			÷.				
heterogeneous nuclear ribonucleoprotein H1 (H) (HNRPH1)	2	L22009	<b>+</b>	+	+	+		. +	
neterogeneous nuclear ribonucleoprotein K (HNRPK)	21	S74678	+	+ .	+	+	+	+	
heterogeneous nuclear ribonucleoprotein R (HNRPR)	<b>i</b>	AF000364		+	+	+	+	+	-
heterogeneous nuclear ribonucleoprotein U (scaffold attachment factor A) (HNRPU)	3	X65488	+	+	+	+	+	+	1
hexokinase 1 (HK1)	2	X66957		+	+	+	-	+	
hexokinase 2 (HK2)	3 ·	Z46376	+	+	+	+	<del>                                     </del>	+	
hexokinase 3 (HK3)	2	U51333		+	-				
hexosaminidase A (alpha polypeptide) (HEXA	1	S62047							
HGMP07I gene for olfactory receptor	2	U76377							
High density lipoprotein binding protein (HDLBP)	2	M64098	+	+	+	+	+	+	·
high-mobility group (nonhistone chromosomal) protein 1 (HMG1)	5	X12597	+	+	+	+	+	+	
high-mobility group (nonhistone chromosomal) protein 1 (HMG1) (non- exact 60%)	1	D63874							
High-mobility group (nonhistone chromosomal) protein 17 (HMG17)	2	M12623	+	+	+	+		+	
high-mobility group (nonhistone chromosomal) protein 2 (HMG2)	2	M83665	+	+	+	+	+	+	* 1
high-mobility group (nonhistone chromosomal) protein isoforms I and Y	2	L17131	+	+	+		+	+	
high-risk humanpapilloma viruses E6 oncoproteins targeted protein E6TP1	1	AF090990.1							
beta (=AB007900 KIAA0440)	•	+			l				

·	•							-	÷ 1, 01200.0000
histidyl-tRNA synthetase (HARS)	2	Z11518	+	+	+	+	+	+	10
histocompatibility antigen (HLA-Cw3), class I	1	U31372							
histone deacetylase 1 (HDAC)	4	U50079	+	+	+	+		+	
histone deacetylase 1 (HDAC1)	2	D50405	+	+	+	+		+	
histone deacetylase 5 (NY-CO-9)	1	AF039691		+	+	1.	<u> </u>	$\vdash$	
HK2 gene for hexokinase II	1	Z46362	· · · · · · · · · · · · · · · · · · ·	+-	<del>                                     </del>		╁╌	†	-
HL9 monocyte inhibitory receptor precursor	2 .	U91928		1		+			
HLA class I heavy chain (HLA-Cw*1701)	1 .						<u> </u>	ļ -	
於人也ass Hocusで heavy chain	2	X50838		1			1		
HLA class II SB 4-beta chain	1	.X03022				·		Γ	
HLA class III region containing NOTCH4 gene	1	U89335	+	+	+	+	<b> </b>	+	
HLA-A	1	Z72423		+	<del>                                     </del>		<del> </del>	$\vdash$	
HLA-A	. 2	AJ006020	<del>                                     </del>	+		$\vdash$	$\vdash$	$\vdash$	
HLA-A 7402	1	AJ223060	<del></del>	+	<del> </del>	╁─	├	├	
HLA-A11	1	U02934		+	<del>                                     </del>	<del>                                     </del>	-	<del>  -  </del>	
HLA-B	2	X75953		+	-	<u> </u>	<del>                                     </del>	├	
HLA-B .	- 1	X83401	<u> </u>	+	<u> </u>	├	├	-	
HLA-B	- 1	X78426		<del> </del>		-	<u> </u>		
HLA-B associated	1	Z37166	ļ <u>, .</u>	<del>  </del>		↓	<u> </u>		
transcript-1 (D6S81E)	'   2	M33509	+	+	+	+	:+	+	
transcript-2 (D6S51E) HLA-B*1529	4	D44501	*	+	+	+	<u> </u>		
HLA-Bw72 antigen	119	L09736		ļ.,	<u> </u>		L		
HLA-C gene (HLA- Cw*0701 allele)	1 1	D83957	+	+	+	+	+	+	high in many libraries
HLA-Cw*0701	9	Z46810		<u> </u>	ļ	<u> </u>	<u> </u>		
HLA-Cw*0801	1	D64151	<del> </del>		ļ			<u> </u>	
HLA-Cw*1203	<del>  '</del>	D64146							
HLA-DC classii	2								<u></u>
histocompatibility antigens alpha-chain (=K01160)	•	X00370							
HLA-DR alpha-chain	17	M60333	+	+	+	+	+	+	high in spleen
HLA-F (leukocyte antigen F)	3	X17093			+	+		+	
HMG box containing protein 1	3	AF019214							
hMLH1 (=U83845)	1	AB017806.1							
Hmob33	3	Y14155			•				· · ·
HMT1 (hnRNP methyltransferase, S. cerevisiae)-like 1 (HRMT1L1)	2	U80213	+	+	+	+		+	
hnRNP C1/C2	2	D28382				Ш			·
homeobox (=X58250	1	M60721							
Mouse homeo box protein, put. transcription factor involved in embryogenesis	*	IVIOU721							1)()
and hematopoiesis) homeobox protein (HLX1)	1	U14326	<u> </u>				_		
(=M60721) homeodomain-interacting	1	AF004849	+		+	+	_	+	
protein kinase 3 (HIPK3) homolog of Drosophila past		AF001434	+		+	+	_	+	·
	2	~1001434	•	1 1			1		l l
(PAST) homolog of yeast (S. cerevisiae) ufd2 (UFD2)	3	D50916	<del></del>	+	+	+		+	

HPV16 E1 protein binding	1	U96131		T ==			1	1 1	<del></del>
protein HRIHFB2157	<del>  '</del> -	AB015344	,	+	<u> </u>			L	
HRX-like protein	<del>                                     </del>			+	+		<u> </u>	+	
(=AF010403 ALR)	0.1	Y08836			ļ.		Ì	ļ	
hsc70 gene for 71 kd heat shock cognate protein	3	Y00371		T -					
HSPC01Ž	1	AF077036.1		·				<del> </del>	
HSPC021	1 1	AF077207.1		_	$\vdash$	<del>                                     </del>	$\vdash$	<del>                                     </del>	
HsPex13p	1	U71374	<b>-</b>			<u>├</u>	_		
htra2-beta-2	1	U87836	+	+	+	+	<b>-</b>	+	
HU-K4	1	U60644		<del>                                     </del>			├	┢	
hunc18b2	1	U63533		+	+	+	_	+	,
HUNKI	1	Y12059	+	+	<u> </u>	+	. +	+	
huntingtin-interacting protein HYPA/FBP11 (HYPA)	1	AF049528							
hVps41p (HVPS41)	1	U87309					7		
hydroxyacyl-Coenzyme A dehydrogenase/3-ketoacyl- Coenzyme A	1	U04627		+	+		+		
thiolase/enoyl-Coenzyme A hydratase (trifunctional protein), alpha subunit						·			
(HADHA) hydroxyacyl-Coenzyme A		045484						·	
dehydrogenase/3-ketoacyl-	'	D16481	† †	+	+.	+		+	
Coenzyme A thiolase/enoyl-Coenzyme A								1	
hydratase (trifunctional								ا. · ا	
protein), beta subunit ((HADHB)									
hydroxysteroid (17-beta) dehydrogenase 1	1	U34879		+	·		+		•
(HSD17 <b>B</b> 1)									
hypothetical protein	1								<del> </del>
hypothetical protein (AL008729) (dJ257A7.2)	1							·	
hypothetical protein (CIT987SK_2A8_1	1	U96629							
chromosome 8)	٠,			·			•		
hypothetical protein (clone 24640)	1	AF055004							
hypothetical protein (clone ICRFp507G2490).	1	Z70222							
hypothetical protein (dJ1042K10.4) (non-exact 76%)	1	AL022238			·	-	·		;
hypothetical protein (dJ465N24.1 similar to predicted yeast and worm	2	AL031432		·	-	1			
proteins) hypothetical protein	2	AL008730					*		
(dJ487J7.1.1) hypothetical protein	2						$\Box$		
(dJ753P9.2) hypothetical protein		AL023653							
(DKFZp5861111)	1	AL050131.1							
hypothetical protein (J257A7.2)	1	AL008729					•		
hypothetical protein (KIAA0440) (=AF026504 R.norvegicus SPA-1 like	1	AB007900							
protein) hypothetical protein (L1H 3'	1						-		·
region) hypothetical protein (S164)	1	P49756			·	_	$\dashv$	_	· · · · · · · · · · · · · · · · · · ·
(5.04)		1				1			·

PCT/CA00/00005

WO 00/40/49								1,	C1/CA00/00003
hypothetical protein (similar to thrombospondin) (non- exact 56%)	1	AF109907	·				,		
hypothetical protein 3	1 :								
hypothetical protein B (HSU47926) (non-exact, 56%)	1	U47926		·					
hypothetical protein from BCRA2 region (CG005)	3	U50532	+	+	+	+	-	+	
hypoxia-inducible factor 1, alpha subunit (basic helix- loop-helix transcription factor) (HIF1A)	1 -	AF050115							0
la-associated invariant gamma-chain (clones lam5ಚಿತ-y (4,2,3))	1	M13555							
iduronate 2-sulfatase	2	M58342	+	+	+	+	<u> </u>	-+	
(Hunter syndrome) (IDS)	1	L20779				_	_	_	· · ·
(=D11016) Ig heavy chain variable	. 2	M34024				<u> </u>		-	
region Ig heavy chain variable	1 .	Z75378		<u> </u>		_		-	
region (VH4DJ) (clone T14.4)	· 								
lg heavy chain variable region (VH4DJ) (clone T22.18)	<sup>1</sup>	Z75392				·			
lg J chain	· 1	M12378							
lg kappa	1	S49007							•
IG kappa light chain variable region A20	1	X63398	100					<u> </u>	
lg kappa light chain, V- and J-region (=X59315)	· 1	D90158							
lg lambda light chain variable region (26- 34ITIIIF120)	1	Z85052							
Ig mu-chain VDJ4-region	1	M16949			<b> </b>				
Ig rearranged anti-myelin kappa-chain (V-J4-region, hybridoma AE6-5)	1	M29469							
Ig rearranged H-chain mRNA V-region	2	M97920							
Ig rearranged light-chain V region (=D90158)	1 .	M74020	-						
IGF-II mRNA-binding protein 3 (KOC1) (non- exact, 75%)	1	U97188	+	+	+			-	
IgG Fc binding protein (FC(GAMMA)BP)	1	D84239	+	+		+		+	
IgG heavy chain variable region (vH26)	·1 .	M83136							
IgM heavy chain (C mu, membrane exons)	1 .	X14939			·				
IkB kinase-beta (IKK-beta)	1	AF029684							
IL-1 receptor type II	1	U14177							-
IL2-inducible T-cell kinase (ITK)	2	S65186							
immediate early protein (ETR101)	1	M62831	+ .		+	+	·		
immunogloblin light chain (lambda)	1	D87018				_			
immunoglobulin (CD79A) binding protein 1 (IGBP1)	1	Y08915	B, T	+	+		+		
immunoglobulin C (mu) and C (delta) heavy chain (=K02878)	2	X57331							
immunoglobulin G Fc receptor IIIB	1	Z46223							
immunoglobulin gamma 3 (Gm marker) (IGHG3)	3	Y14737	+.			. +		+	high in many libraries

WO 00/40749			•						C1/CA00/00005
immunoglobulin gamma heavy chain variable region (=X61011)	1	Z6 <b>6542</b>			•	Ĩ.			6 ·
immunoglobulin heavy chain (VI-3B)	1	X62109							
immunoglobulin heavy chain J region	1	X86356					,		
immunoglobulin heavy chain J region, B1 haplotype	2	X86355							
immunoglobulin heavy chain variable region (IGH) (clone 21u-48)	1	AF062126				٠			
immunoglobulin heavy chain variable region (IGH) (clone 23u-1)	1	AF062212				÷			
immunoglobulin heavy chain variable region V1-18 (IGHV@) (=X60503)	. 2	M99641			·				
immunoglobulin heavy chain variable region V3-43 (IGHV@)	. 2	M99672				·	. ,		Í
immunoglobulin heavy chain variable region V3-7 (IGHV@)	3	M99649					,		
immunoglobulin IgH heavy chain Fd fragment	1	U07986	·						
immunoglobulin kappa light chain	l <sub>a</sub>	X58081				·			
immunoglobulin kappa light chain V-segment A27	1	X12686	·						·
immunoglobulin light chain.	1	D86990					T		
immunoglobulin light chain (low match)	1	D86996					··		
immunoglobulin light chain variable region (lambda IIIb subgroup) from IgM rheumatoid factor	1	L29157							
immunoglobulin M heavy chain V region=anti-lipid A antibody	1	S50735							
immunoglobulin mu (IGHM)	9	X57086	+	+		+		+	
immunoglobulin mu binding protein 2 (IGHMBP2)	1	L24544	1	+			+		
immunoglobulin superfamily, member 2 (IGSF2)	1 .	Z33642							
Immunoglobulin VH mRNA (487 bp) (=M99652 immunoglobulin heavy chain variable region V3-11	1	X61013							**
(IGHV@)) imogen 38 (IMOGEN38)	<del></del>	Z68747	-	+	+	+	-	+	
IMP (inosine monophosphate)	1	J05272	+	+	+	+			
dehydrogenase 1 (IMPDH1)					·				
IMP (inosine monophosphate) dehydrogenase 2 (IMPDH2)	2	L39210	* *	+.	+	+		+	
inc finger protein 151 (pHZ- 67) (ZNF151)		Y09723	+	+	+	+		+	·
inc finger protein, C2H2, rapidly turned over (ZNF20)	1	AF011573		+	+		·		
inducible poly(A)-binding protein (IPABP)	1	U33818	+	+	+	+		+	
inducible poly(A)-binding- protein (IPABP) (low match)	. 1	U33818							

inducible protein (Hs.80313)	2	L47738	+	.+	+	+	Ī.	+	
inhibitor of DNA binding 2, dominant negative helix-	4	M97796	+	. +	+	+	+	+	
loop-helix protein (ID2)						-			
inhibitor of kappa light polypeptide gene enhancer	2	AF044195			٠.				
in B-cells, kinase complex- associated protein		٠.							
(IKBKAP)									· }
inositol 1,3,4-trisphosphate 5/6-kinase	1	U51336	+	+	+	*	+	+	
inositol 1,4,5 trisphosphate receptor type 1 (ITPR1)	1	U23850		<del>, t</del>	+	+			
inositol 1,4,5-trisphosphate 3-kinase B (ITPKB)	2	X57206	В	+	+		+		
inositol monophosphatase	1	S38980		-					· · · · · · · · · · · · · · · · · · ·
inositol polyphosphate-5- phosphatase, 145kD (INPP5D)	2	U84400	+	+	+	+		+	
Ins(1,3,4,5)P4-binding protein	1	X89399		+				+	
insulin-like growth factor 2 receptor (IGF2R)	5	Y00285	+	+	+	+		+	
integral membrane protein 1 (iTM1)	1	L38961			+	+		+	
integral membrane protein 2C (ITM2C)	1	AF038953	Ιn		+		+.	+	_
integral membrane protein Tmp21-I (p23)	3	U61734	+	+	+	+	+	+	
integrin beta 4 binding protein (ITGB4BP)	2	AF047433			+			+	
integrin, alpha 2b (platelet glycoprotein Ilb of Ilb/Illa	3	M34480		+			+		
complex, antigen CD41B) (ITGA2B)						٠.			
integrin, alpha 5 (fibronectin receptor, alpha	4	X06256	+	+	+		+	+	
polypeptide) (ITGA5)	•	··							
integrin, alpha L (antigen CD11A (p180), lymphocyte function-associated antigen 1; alpha polypeptide) (ITGAL)	6	Y00796							
integrin, alpha M	1	M18044						$\vdash$	
(complement componentreceptor 3.									
alpha; also known as CD11b (p170),	α.	•							
macrophage antigen alpha polypeptide) (ITGAM)									
integrin, alpha X (antigen	1	M81695	+	+				+	
CD11C (p150), alpha polypeptide) (ITGAX)									
integrin, beta 1 (fibronectin receptor, beta polypeptide,	2	X07979							
antigen CD29 includes MDF2 MSK12) (ITGB1)		*							
integrin, beta 2 (antigen CD18 (p95), lymphocyte	32	M15395	+	+		+	,	+	•
function-associated antigen 1; macrophage antigen 1 (mac-1) beta subunit) (ITGB2)									,
integrin, beta 7 (ITGB7)	1	M68892	+						
Integrin-linked kinase (ILK) intercellular adhesion	1	U40282	+	+	+	+	Ļ	+	
molecule 1 (CD54), human rhinovirus receptor (ICAM1)	1	J03132	•			+	+	+	
intercellular adhesion molecule 2 (ICAM2)	1	X15606	+	+	+	+		+	
					L			لـــا	L

			_						
intercellular adhesion molecule 3 (ICAM3)	6	X69819	+					+	;·
intercellular adhesion	1	L27670			<del>                                     </del>		-	+	
molecule 4, Landsteiner- Wiener blood group									
(ICAM4)			·						_
Interferon consensus sequence binding protein 1	1	M91196	W, 7	lymp	homa				
(ICSBP1)		·. ·							
Interferon consensus	1	M91196			Γ				
sequence binding protein 1 (ICSBP1) (low match)						٠.			
interferon regulatory factor 2 (IRF2)	- 4.	X15949	+	+	+	+			
interferon regulatory	4	L05072	+	+	+	+	$\vdash$	+	
factor1 (IRF1)		U51127	+	+ -		+			
factor5 (IRF5)					· .				
interferon, gamma- inducible protein 16 (IFI16)	2	M63838	+	+	+	+		+	
interferon, gamma-	9	J03909	+	+	-	+	-	+	
inducible protein 30 (IFI30) INTERFERON-INDUCED	1	P32455				_		_	
GUANYLATE-BINDING	•	1 02-100			l		ļ	١.	
PROTEIN 1 (GUANINE NUCLEOTIDE-BINDING					:				
PROTEIN 1) (non-exact					] ·				
62%) interferon-induced protein	3	X84958		+	+	+		+	•
17 (IFI17)					:	Ĺ			
interferon-induced protein 54 (IFI54)	5	M14660	·	l					
interferon-inducible (1-8D)	, 5	X57351	T		+		+	+	·
interferon-inducible (1-8U)	1	X57352			+		+	+	
interferon-related developmental regulator 1	5	Y10313	,	+	+			+	
(IFRD1)						٠			
interferon-stimulated transcription factor 3.	2	M87503	·	+		+	Γ.	+	
gamma (48kD) (ISGF3G)	•								
interleukin 1 receptor, type II (IL1R2)	1	U64094				+			
Interleukin 10 receptor, beta (I.10RB)	1	U08988	Tactivate	d	+			+	
interleukin 12 receptor,	2	U03187	+	Ī-		<del>                                     </del>			only found in T cell
beta 1 (IL12RB1) interleukin 13 receptor,	2	Y09328		+	+ :	+	+	+	
alpha 1 (IL13RA1)	L					Ĺ	Ĺ	Ĺ	
interleukin 16 (lymphocyte chemoattractant factor)	6	U82972		+			ļ. ·		
(IL16)									·
interleukin 18 receptor 1 (IL18R1)	1	U43672							
interleukin 2 receptor, beta (IL2RB)	9	M26062							
interleukin 2 receptor,	6	D11086	+	<u> </u>	-+	-	-	+	·
gamma (severe combined immunodeficiency) (IL2RG)									,
interleukin 4 receptor	3	X52425	+	+		+	$\vdash$	+	<del> </del>
(IL4R) interleukin 6 receptor	5	X12830		+		_		+	
(IL6R)				•			.		*
interleukin 6 signal transducer (gp130,	1	M57230							
oncostatin M receptor)				ŀ		-	.	١.	
(IL6ST) interleukin 7 receptor	14	M29696	+ .	<u> </u>	<u> </u>		<u> </u>	+	• •
(IL7R)						L	L	Ľ	
interleukin 7 receptor (IL7R) (low match)	. 1	AF043123							
interleukin 8 (IL8)	8	Y00787	+	<del>                                     </del>	+	<del>                                     </del>	+	$\vdash$	High in activated T
									cells, bone and pancreatic islets
L	لـــــــــــــــــــــــــــــــــــــ	L <u> </u>		<u> </u>	<u></u>		L	ــــــــــــــــــــــــــــــــــــــ	perior code islets

	•							_	· - /
interleukin 8 receptor alpha (IL8RA)	11	L19591						•	:
interleukin 8 receptor, beta (IL8RB)	14	M94582						-	
interleukin enhancer binding factor 2, 45kD (ILF2)	3	U10323	+	+	+	+	+	+	high in uterus
interleukin enhancer binding factor 3, 90kD (ILF3)	2	U10324							
interleukin-1 receptor- associated kinase 1 (IRAK1)		L76191		+	+	+	•	+	
interleukin-1 receptor- associated kinase 1 (low match)	1	U52112			. ,				
interieukin-10 receptor, alpha (IL10RA)	5	U00672	+	+	+	+			
interleukin-11 receptor, alpha (IL11RA)	7	·Z38102		+	+				
INTERLEUKIN-14 PRECURSOR (IL-14) (HIGH MOLECULAR WEIGHT B-CELL GROWTH FACTOR)	1	P40222							
(HMW-BCGF) (non-exact 46%)									
intestinal carboxylesterase; liver carboxylesterase-2 (ICE)	1	U60553		+	•		+		
inversin protein (non-exact 52%)	1	AF084367							
IQ motif containing GTPase activating protein 1 (IQGAP1)	6	L33075							
IQ motif containing GTPase activating protein 2 (IQGAP2)	1	U51903		+		.+			
isocitrate dehydrogenase 1 (NADP+), soluble (IDH1)	1 .	AF020038	+	+	+	+	+	+	
isocitrate dehydrogenase 2 (NADP+), mitochondrial (IDH2)	2	: X69433	+	+	+	+	+	+	
isocitrate dehydrogenase 3 (NAD+) alpha (IDH3A)	2	U07681			+				
isocitrate dehydrogenase 3 (NAD+) gamma (IDH3G)	1	Z68907	+	+	+	+		+	
isolate Aus3 cytochrome b (CYTB)		AF042516							
isolate TzCCR5-179 CCR5 receptor (CCR5)	1	AF011524						-	
isopentenyl-diphosphate delta isomerase (IDI1)	5	X17025	+	+	+	+		+	
Janus kinase 1 (a protein tyrosine kinase) (JAK1)	4	M64174	+	+		+		+	
Janus kinase 2 (a protein tyrosine kinase) (JAK2)	1	AF005216							
Jk-recombination signal binding protein (RBPJK)	2	L07876							
JM1 protein jumonji (mouse) homolog	1	AJ005890 U57592		+	+	+		+	
(JMJ)	1	X51346	+						
(JUND) jun dimerization protein	1	AF111167	<b>*</b>	+	+	+		+	·
junction plakoglobin (JUP)	1	M23410		+	+	+		+	only found in germ
	<u> </u>	1	L'				ـــا	ب	

WO 00/40749									LICAUU/UUUU
kangai 1 (suppression of	1	U20770	. +	+.	+	+	. +	+	
tumorigenicity 6, prostate; CD82 antigen (R2					İ			-	• •
leukocyte antigen.									
antigen detected by monoclonal and antibody									
IA4)) (KAI1)							•		• • •
karyopherin (importin) beta	. 2 .	L3979 <b>3</b>	+	+	+	+	+ :	+	
1 (KPNB1) karyopherin (importin) beta	1	U72395	+	+	+.	+			
l2 (KPNB2)	'	072353	<b>T</b>		Ψ.	Ť.			
karyopherin alpha 1	1	S75295	+	+	+		+		
(importin alpha 5) (KPNA1) karyopherin alpha 2 (RAG	1	U09559							
cohort 1, importin alpha 1)	•	000000		1 • 1					
(DPNA2)									
karyopherin alpha 3 (importin alpha 4) (KPNA3)	. 1	D89618		+			+		
karyopherin alpha 4	1	M17887		+	+				
(KPNA4)		1555486							
Katanin (80 kDa) (KAT)	1	AF052432		+	+	+	,	+	
KE03 protein	2	AF064604							
Kelch-like ECH-associated protein 1 (KIAA0132)	1	D50922	· ·						
(66%aa)								L	
Keratin 8 (KRT8)	1	X74929		+	+	+	+	+	
ketohexokinase	1	X78678		+		+	+		
(fructokinase) (KHK) KIAA0001 (KIAA0001)	1	Q15391		1				<u> </u>	
(72% aa)	·	Q10001			-				
KIAA0001 (KIAA0001) (76% aa)	. 1	Q15391							
KIAA0001 (KIAA0001)	1	. Q15391							
(non-exact 72%) KIAA0002 (KIAA0002)	5	D13627		+	. +'	+		+	×
KIAA0005 (KIAA0005)	4	D13630		+	+	+	_	+	
KIAA0010 (KIAA0010)		D13635	<del>                                     </del>	+	_			+	
KIAA0016 (KIAA0016)	1	. D13641	+	+	+	+	┝┷	+	
KIAA0017 (KIAA0017)	2	D87686				<del></del>			
KIAA0022 (KIAA0022)	2	D14664	<u> </u>	+	+	+	H	<u> </u>	· · · · · · · · · · · · · · · · · · ·
KIAA0023 (KIAA0023)	1	D14689		+				<del> </del>	
KIAA0024 (KIAA0024)		D14694	+	+	+	+		+	<u> </u>
KIAA0025 (KIAA0025)	1	D14695	<del> </del>	+	+	+	+	+	
KIAA0026 (KIAA0026)	2	D14812		+	+	+	┝∸	+	
KIAA0027	<del>-</del>	D25217	<del> </del>	+-		<del> </del>	<u> </u>	-	
KIAA0032 (KIAA0032)	2	D25215		+	+	+	-		
KIAA0040 (KIAA0040)	1	D25539	+	+	+	+	├-	+	
KIAA0050 (KIAA0050)	4	D26069	<del> </del>			-		-	
KIAA0053 (KIAA0053)	17	D29642	+	-	+	+	-	-	
KIAA0057 (KIAA0057)	1	D31762	+	+	+	+	+	+	high in fetal lung
KIAA0058 (KIAA0058)	11	D31767	+	<del> -</del>	+	+	Ė	+	
KIAA0063 (KIAA0063)	3	D31884	+	+	+	+	-	+	
KIAA0064 (KIAA0064)	1	D31764	<del>                                     </del>	+	+	+		+	
KIAA0066	1	D31886	+	+	+	+		+	
KIAA0068	1	D31550	<del> </del>	+	+	+	+	+	<u> </u>
KIAA0073	3	D38552		+	+	+	<u> </u>	+	<del></del>
KIAA0081	2	D38332	<del> </del>	+	<del>ٺ</del>	+	<u> </u>	+	
KIAA0084	2	D42039	+	+	+	+	├	+	
KIAA0085	26	U30498	+	+	+	+	+	+	
KIAA0088		D42041	+ +	+			+	17	· · · · · ·
KIAA0090	3	D42041	+	+	+	+	+	+	
KIAA0092 (KIAA0092)	2	D42044	<u> </u>	+	+	+	╀	+	·
MINOUSZ (NIANOUSZ)	<u> </u>	1					<u> </u>		<u>L</u>

KIAA0094	3	D42084		1:	+	+			s.
KIAA0095 (KIAA0095).	1	D42085		<b></b>					
KIAA0096	1:	D43636	+	1+	+	+		+	
KIAA0097 (KIAA0097)	1	X92474	1	+	+	-	+		
KIAA0099 (KIAA0099)	3	D43951	+	+	+	+	+	+	
KIAA0102 (KIAA0102)	2	D14658		+	<u> </u>	+	+	+	
KIAA0105	<del></del>	D14661	В	+			+.	+	
KIAA0120	2	P37802						$\vdash$	
KIAA0120 (non-exact, 65%)	1	M83106							
KIAA0121 (KIAA0121)	1	D50911	+	+	+	+		+	
KIAA0123		D21064		+	+	+		+	
KIAA0128	111111	D50918	+	+	+	+	-	+	
KIAA0129 (KIAA0129)	1	D50919	<del></del>	+	+	+		<u> </u>	
KIAA0130 (KIAA0130)	<del></del>	AF055995		+	+	+	-	<u> </u>	· · · · · · · · · · · · · · · · · · ·
KIAA0136	2	D50926		-		-			
KIAA0137 (KIAA0137)	1	AB004885	· · ·	+	+	+	-	+	
KIAA0140 (KIAA0140)	· ·	D50930	+	+		+	<del> </del>	+	<del>                                     </del>
KIAA0141 (KIAA0141)	3	D50931	<del> </del>	1		Ė	├—	<u> </u>	<del> </del>
KIAA0144 (KIAA0144)	3	D63478	+	++	+	+	<u> </u>	+	
KIAA0144 (KIAA0144) (low match)	<del>- i -</del>	D63478	•			-		<u> </u>	
KIAA0144 (non-exact 61%)	1	Q14157		-		├	$\vdash$	<del>                                     </del>	
KIAA0144 (non-exact 65%)	1	Q14157		<del> </del>		$\vdash$	$\vdash$	├	· · · · · · · · · · · · · · · · · · ·
KIAA0146	2	D63480		++	+	+	-	+	
KIAA0148 (KIAA0148)	<del>-</del>	D63482	· · · · · · · · · · · · · · · · · · ·	+	-	├	-	+	<del></del>
KIAA0154	2	D63876	<del></del>	+	+	+	-	+	<u> </u>
KIAA0156	<del></del>	D63879		+	+	+	_	+	
KIAA0160		D63881	<del></del>	-	<u> </u>	<del>                                     </del>	H	<u> </u>	
KIAA0161 (KIAA0161)	<del>-</del>	D79983		+		┰	-		<u> </u>
KIAA0164 (KIAA0164)	3	D79986		+-		<u> </u>	-	<b>├</b> —	· · · · · · · · · · · · · · · · · · ·
KIAA0167 (KIAA0167)	1	D79989	<del></del>	+				-	
KIAA0168 (KIAA0168)	3	D79990		++	+	+		+	
KIAA0169	3	D79991		+-	<u> </u>	Ŀ	<u> </u>	<del>ا</del> نـــٰ	
KIAA0171 (KIAA0171)	3	D79993		++	-	+	<u></u>	+	
KIAA0174 (KIAA0174)		D79996	+	++	<del>-</del>	+	_	+	
KIAA0179	7 2	D80001	<del></del> -	1	+	+		+	
KIAA0181		D80003		+	1	+	_	+	
KIAA0183	1			+			+	+	ļ <del></del>
KIAA0184	4	D80005	+	+	+	+		Ţ	
1	1	D80006	* .	<del>                                     </del>	<u> </u>	ļ <u> </u>		+	
KIAA0191 (72% aa)	1	D83776	·	<u> </u>	·	<u> </u>		<u> </u>	
KIAA0191 (non-exact 77%)	1					<u> </u>	<u> </u>	<u> </u>	
KIAA0193 (KIAA0193)	1	D83777	+	+	+	+	<u>L</u>	+	
KIAA0200 (KIAA0200)	1	D83785		+	+	+		+	<u> </u>
KIAA0210 (KIAA0210)	3	D86965							
KIAA0217	2	D86971	+.	+.	+	+		+	
KIAA0219	2	U77700		+	+	+		+	<u> </u>
KIAA0222 (KIAA0222)	. 1	D86975							
KIAA0223	2	D86976							
KIAA0229	1	D86982	+	+					
KIAA0232 (KIAA0232)	1	D86985		+	+	+		+	
KIAA0233 (KIAA0233)	1	D87071							
KIAA0235	2	D87078	+	+	+	+			
KIAA0239	1	D87076	+.	+				Т	

KIAA0239 (non-exact 80%)	1 1	1 107076							
KIAA0240	-	D87076		<u> </u>	<u> </u>			<u> </u>	
KIAA0242	L '	D87077		<u> </u>		<u> </u>	<u> </u>	<u> </u>	
KIAA0248	4	D87684	+	+	+	+	+	+	
,	2	D87435		+	+	+		+	
KIAA0249 (KIAA0249)	3	D87436	+	+	+	+		+	
KIAA0253	5	D87442	+	+	+	+	+	+	
KIAA0254 (KIAA0254)	. 1	D87443		+	+	+			
KIAA0255(KIAA0255)	· 4	D87444		+	+	+		+	
KIAA0262 (KIAA0262)	3	D87451	+	+	+	+	Ī	+	
KIAA0263 (KIAA0263)	1	D87452	+	+	+	+.		+	
KIAA0264	3	D87453		+	+	+		+	
KIAA0268	1 1	D87742	+	+		+		+	-
KIAA0269	1	Q92558					<u> </u>		
KIAA0275 (KIAA0275)	13	D87465	+	+	<u> </u>	+		+	
KIAA0304 (KIAA0304)	2	AB002302	+	+	+	+	+	+	
KIAA0308 / .	2	AB002306		+	+ -		<del></del>	+	
KIAA0310 (KIAA0310)	1	AB002308		+	+	+	<u> </u>	+	
KIAA0314 (=U96635 M.musculus ubiquitin protein ligase Nedd-4)	3	AB002312							
KIAA0315 (KIAA0315)	4	AB002313		+	+	+	+	+	
KIAA0325 (=L08505 R.norvegicus cytoplasmic dynein heavy chain (MAP	2	AB002323							
1C))					-				
KIAA0329 (KIAA0329)	1	AB002327		+	+	+	· ·	+	•
KIAA0330	1	AB002328	+	+	+			+	
KIAA0332	1	AB002330	٠.	+	+	+		+	
KIAA0333	2	AB002331	•	.+	+	+	+	+	
KIAA0336 (KIAA0336)	3	AB002334	+	+ -	+	+		+	
KIAA0336 (KIAA0336) (low match) KIAA0342 (KIAA0342)	1	AB002334							
KIAA0344 (KIAA0344)	1.	AB002340		+	+			+.	
KIAA0354 (KIAA0354)	2	AB002342				+		+	
KIAA0365 (KIAA0365)	1	AB002352	+	+	+	+		+	
KIAA0370	3	AB002363	+	+	+	+	+	+	
	6	AB002368	·	+	+	+	+	+	
KIAA0372 (KIAA0372) KIAA0373 (KIAA0373)		AB002370							
	1	AB002371		• +	•	+			
KIAA0375 (KIAA0375)	1	AB002373		+		+			
KIAA0377 (KIAA0377)	1	AB002375		+		+	+		
KIAA0379	1	AB002377				+			
KIAA0379 (non-exact, 85%)	1	AB002377	•						
KIAA0380 (KIAA0380)	1	AB002378	+	+		+		+	
KIAA0380 (KIAA0380) (60%aa)	1	AB002378						17	
KIAA0382 (KIAA0382)	2	AB002380		+	+	+		+	
KIAA0383	1	AB002381							
KIAA0386 (KIAA0386)	5	AB002384		1			$\dashv$	$\dashv$	
KIAA0392	1	AB002390				$\vdash$		_	
KIAA0397 (KIAA0397)	4	AB007857		+	+	Ŧ	+	+	<del></del>
KIAA0403	3	AB007863				-	_	-	
KIAA0404	1	AB007864		+		+	$\dashv$	-	
KIAA0409		AB007869		+		+		$\dashv$	
	•								
KIAA0421 KIAA0424 (non-exact 82%)	· ·	AB007881	+	+	+			+	<del>-</del>

			_					•	Ç1/CA00/00003
KIAA0428 (KIAA0428)	9	Y13829				Ι			
KIAA0429 (KIAA0429)	2	AB007889	+	+	+	+	T	+	
KIAA0430 (KIAA0430)	2.	AB007890				1			only in ovary
KIAA0432 (KIAA0432)	2	U86753	1	+	+				
KIAA0435 (KIAA0435)	1	AB007895				1.	1		
KIAA0438 (KIAA0438)	-1	AB007898		+	+	+	1	+	
KIAA0447 (KIAA0447)	3	AB007916	+	+	+	+	1	+	<del>                                     </del>
KIAA0449	1	AB007918	<u> </u>	+.		†	_	+	·
KIAA0456	1	AB007925	· · · · · · · · · · · · · · · · · · ·	+	+	+	1	+	
KIAA0458 (KIAA0458)	1	AB007927		<del>                                     </del>	<del>                                     </del>	$\vdash$	+	<del>                                     </del>	•
KIAA0462	1	AB007931	+	+	+	+	<del>                                     </del>	+	
KIAA0465	1 . 1 .	AB027934		141	<b>17.</b>	+.	1. *	·±	1
KIAA0476 (KIAA0476)	1	AB007945		+	+	+	╁	<del> </del>	<del></del>
KIAA0489	1	AB007958		-	1	+-	╁	+-	
KIAA0494 (KIAA0494)	1	AB007963	+	+	+	+	+-	+	
KIAA0515	1 1	AB011087	+	+	+	+	╁	+	<u> </u>
KIAA0521	3	AB011093	+	+	<del>                                     </del>	╁	-	+	
KIAA0525	+	AB011097	<del></del>	+	<b></b>	+	-	<del>                                     </del>	<u> </u>
KIAA0530	1	AB011102	<u> </u>	+	+	+	$\vdash$	<del> </del>	
KIAA0532	1.	AB011104	+	+	+	+	<del>                                     </del>	+	
KIAA0537 (KIAA0537)	+	AB011109		<b></b> -	<u> </u>	<b>↓</b> `	-	<del>                                     </del>	·
KIAA0540	+	AB011112	+	+	+	+	╄	+	
KIAA0543		AB011115		-	+	+	_	+	
KIAA0544	<del>                                     </del>	AB011116		<u> </u>	+	1	ļ		
KIAA0549	2	AB011121	<u> </u>	+		+	1	+	
KIAA0551	2	AB011121		+	+	+	↓	+	
KIAA0554	8			+		ــنــا	<u> </u>	+	·
KIAA0561	1 1	AB011126 AB011133		+	+	+	Ŀ	+	
KIAA0562 (KIAA0562)		1 :		+		+		<u> </u>	
KIAA0563 (KIAA0563)	1	AB011134				L		<u>L</u>	·
KIAA0569 (KIAA0569)	1	AB011135				<u> </u>	Ŀ		•
KIAA0509 (KIAA0509)	2	AB011141	(	+	+	+		+	
KIAA0573	2	AB011143		+	+	+			
	1	· AB011145		+		+		+	
KIAA0576	. 1	AB011148							
KIAA0580	1	AB011152							
KIAA0584	1	AB011156		+					
KIAA0592	3	AB011164	+	+	+	+	`	+	
KIAA0596	1	AB011168		+	+				
KIAA0598 (KIAA0598)	1	AB011170		+	+	+			·
KIAA0608	.1.	AB011180			+	+			
KIAA0614	2	AB014514	+	+	+	+		+	
KIAA0615 (KIAA0615)	1	AB014515							
KIAA0621	1	AB014521		+	+		_	+	
KIAA0648	1	AB014548		+	+	+		+	
KIAA0652 (KIAA0652)	1	AB014552	+.	+.	+	+		+	•
KIAA0668	1	AB014568					<del>                                     </del>	-	
KIAA0669	1	AB014569		<del>                                     </del>			$\vdash$		
KIAA0671 (KIAA0671)	1	AB014571		<del>                                     </del>	+	+	_	+	
KIAA0675 (KIAA0675)	1	AB014575	<del></del>	+		+	+		
KIAA0676	1-1-	AB014576	<del></del>	+	+	+	-	+	•
KIAA0677 (KIAA0677)	2	AB014577	<del></del>	+	+	+	+	+	
KIAA0678	1	AB014578	+	+	+	+	Ė	+	
KIAA0679	6	AB014579	-	+	+	+		+	
				L .	<b>'</b>				7

KIAA0680 (KIAA0680)	<u> </u>	AB014580	I	1	1	_	Т	_	9 7
KIAA0692	1	AB014592	+	+	+	+	-	+	<del> </del>
KIAA0697	1	AB014597		+		-	$\vdash$	H	
KIAA0699	1	AB014599	+	++	+	+	$\vdash$	+	
KIAA0700	1	AB014600	<del>                                     </del>	+	+	+	-	+	<del>                                     </del>
KIAA0737 (KIAA0737)	3 -	AF014837	+	+	+	+	-	+	
KIAA0748 (KIAA0748)	2	AB018291		+	-	-		<del>                                     </del>	<del></del>
KIAA0763 (KIAA0763)	2	AB018306	+	+	+	+	$\vdash$	+	<del> </del>
KIAA0769 (KIAA0769)	2	AB018312		+	+	+	-	+	
KIAA0782	. 1.	AB018325	+	+	-	+		l ·	high in BPH stroma
KIAA0796	1	AB018339		+	+	-	├	+	Ingit iii Di 11 30 Olik
KIAA0798 (KIAA0798)	1	AB018341	<del> </del>	+	<u> </u>	<u> </u>	├-	<u> </u>	· · · · · · · · · · · · · · · · · · ·
KIAA0823	1	AB020630		+	├		├	-	
KIAA0854	<u> </u>	AB020661	+	+	+	+	├	+	
KIAA0856	1 1	AB020663		+	+	+	├_	+	<u> </u>
KIAA0860	1	AB020667		+	<u> </u>	+	_	ļ. T	ļ
KIAA0862	1	AF054828	<del></del>	+	+	+	<u> </u>	-	
KIAA0871 (non-exact 88%)	- : 1	AB020678	<u> </u>	+	<u> </u>	<u> </u>	<u> </u>	<u> </u>	
KIAA0873	1	AB020680		+	+	+	<del> </del>	+	
KIAA0892		AB020699	+	++	+	+		+	9.
KIAA0906	1	AB020713	+	+	+	<del> </del>	<u> </u>	+	<u> </u>
KIAA0991	<del></del>	AB023208.1	<u> </u>	<u> </u>	<u> </u>	<u> </u>		Ľ	<u> </u>
killer cell lectin-like	<del></del>	U11276		ļ	+	+	<u> </u>	+	
receptor subfamily B, member 1 (KLRB1)		0.11270			•			*	
killer cell lectin-like receptor subfamily C,	1	U96846							
member 4 (KLRC4) kinectin 1 (kinesin receptor) (KTN1)	1	D13629		-	·				
kinesin family member 5B (KIF5B)	2	X65873		+	+	+		_	
kinesin-like DNA binding protein	1	AB017430	, x	+	+	+		+	
Krueppel-related DNA- binding protein (TF6) (low- match)	. 1 ""	M61869							·
Kruppel related gene (clone pHKR1RS)	1.	M20675							
Kruppel-like zinc finger protein Zf9 Kruppel-like zinc finger	3	U51869	+	+	+	+	+	+	
protein Zf9 (non-exact 76%)	1	U44975		+	+		+	*	
kruppel-type zinc finger protein, ZK1	1	AB011414.1							
L apoferritin	3	X03742							
lactate dehydrogenase A (LDHA)	3	X02152		+	+	+	+	+	
lactate dehydrogenase A (LDHA) (non-exact, 81%)	1 .	X02152							
lactate dehydrogenase B (LDHB) lactotransferrin (LTF)	6	X13794	+	+	+	+	+	+	high in fetal lung fibrablast
laminin binding protein (low	1	U07643 D28372	+			+		+	high in bone marrow
score) laminin receptor 1 (67kD);				ا ــا					
Ribosomal protein SA (LAMR1)	20	X15005	+	+	+	+	+	+	high in many libraries
laminin receptor homolog (3' region)	1	S35960							
laminin, gamma 1 (formerly LAMB2) (LAMC1)	2	J03202	+	+	+			+	

WO 00/40/49								•	C1/CA00/00005
latent transforming growth factor beta binding protein 1 (LTBP1)	2	M34057		+	+	+		+	
LAZ3/BCL6 (=Z79582;D28522/4)	1	Z79581	<del></del>						
LDLC	2	Z34975	+	+	+	+	$\vdash$	+	
lecithin-cholesterol acyltransferase (LCAT) (non-exact, 66%)	1	M17959					·		
lectin, galactoside-binding, soluble, 2 (galectin 2) (LGALS2)	1	M87842	·			+			
lectin, galactoside-binding, soluble, 3 binding protein (galectin 6 binding protein) (LCALS3BP)	1	L13210	+	+	+	+		+	
leucine rich repeat (in FLII) interacting protein 1 (LRRFIP1)	5	AJ223075	+	+	+	+	+	+	
leucocyte immunoglobulin- like receptor-5 (LIR-5)	2	AF072099				+			·
leucocyte immunoglobulin- like receptor-6a (LIR-6)	7	AF025530							-
leucocyte immunoglobulin- like receptor-7 (LIR-7)	2	U82275		+					only found in CNS
leukemia virus receptor 1 (GLVR1)	1	L20859	+ ,	+	+	+		+	
leukocyte adhesion protein p150,95 alpha subunit	1	M29484						Ŀ	
leukocyte antigen, HLA-A2	3	Y13267			·				
leukocyte immunoglobulin- like receptor (MIR-10)	3	AF025528		+			:		
leukocyte tyrosine kinase (LTK)	. 1	X60702	+						found only in blood
leukocyte-associated Ig- like receptor 1 (LIAR1)	3	AF013249				.+			
leukotriene A4 hydrolase (LTA4H)	6	J03459	+	+	+	+	+	+	·
leupaxin (LDPL)	2 .	AF062075	+			+		+	
ligase I, DNA, ATP- dependent (LIG1)	1	M36067	В, Т	+	+		+	+	
LIM and SH3 protein 1 (LASP1)	. 2	X82456	+	+	+	+	+	+	
LIM domain kinase 2 (LIMK2)	2	AC002073	+	+	+	+		+	
line-1 protein	1							٠.	
Line-1 repeat mRNA with 2 open reading frames	1	U93566	+	+	+	+	+	+	
Line-1 repeat with 2 open reading frames	1	M22332	+	+	+	+	+	+	high in gastric tumor
LINE-1 REVERSE TRANSCRIPTASE HOMOLOG	1 .	P08547					÷	·	
lipase A, lysosomal acid, cholesterol esterase (Wolman disease) (LIPA)	4	X76488	+.	+	+	+		+	
lipase, hormone-sensitive (LIPE)	1	L11706	+	. +				+	· .
LMP7	. 1	L11045	•						
Lon protease-like protein (LONP)	2	X74215	+	+	+	+	Ŀ	+	
low density lipoprotein- related protein 1 (alpha-2- macroglobulin receptor) (LRP1)	2	AF058414					+		only in liver
low density lipoprotein- related protein-associated protein 1 (alpha-2- macroglobulin receptor- associated protein 1) (LRPAP1)	1	M63959		+	+		+	+	

					•			-	C17CA00700003
low density lipoprotein- related protein-associated protein 1 (alpha-2-	1	M63959							
macroglobulin receptor- associated protein 1)								1	
(LRPAP1) (non-exact, 75%)					ľ			·	
low-affinity Fc-gamma receptor IIA	1	L08107		1.		$\vdash$		<u> </u>	
LPS-induced TNF-alpha factor (PIG7)	. 9	AF010312	+	+	+-	+	+	+	
Lst-1	1	U00921	+	+	+	+	-	+	
L-type amino acid transporter subunit LAT1	. 1	AF104032	· ·					-	
lung resistance-related protein (LRP)	1	X79882	+	+	+	+		+	
Lymphocyte antigen 75 (LY75)	. 1	AF011333	В				一		
lymphocyte antigen 9 (LY9)	2	L42621		╁┈┈		<del>                                     </del>	H	$\vdash$	
lymphocyte antigen HLA- B*4402 and HLA-B*5101	. 2	L42345	<u> </u>					-	
lymphocyte cytosolic protein 1 (L-plastin) (LCP1)	42	J02923							
lymphocyte cytosolic protein 2 (SH2 domain-	.4.	U20158		1	lymp	hom	a, T	activ	rated
containing leukocyte protein of 76kD) (LCP2)									
lymphocyte glycoprotein T1/Leu-1	2	X04391	+		+				
lymphocyte-specific protein 1 (LSP1)	16	M33552	+	+	+	+		+	
lymphocyte-specific protein tyrosine kinase (LCK)	7	M36881		+				+	
lymphoid phosphatase LyP1	1	AF001847				T	-		
lymphoid-restricted membrane protein (LRMP)	4	U10485	+		+	+			
lymphoid-specific SP100 homolog (LYSP100-A)	1	U36500				-		+	
lymphoma proprotein convertase (LPC)	2	U33849	+	+	+	+		+	
LYSOSOMAL PROTECTIVE PROTEIN PRECURSOR	1	P10619	· ·						
(CATHEPSIN A) (CARBOXYPEPTIDASE C)									
lysosomal-associated	1	J04182	+	+	+	+	+	+	
membrane protein 1 (LAMP1)									•
Lysosomal-associated membrane protein 2 (LAMP2)	1	J04183		+	+	+	+	+-	
lysozyme (renal	39	M19045	+	+	+	+		+	
amyloidosis) (LYZ) lysyl-tRNA synthetase	2	D32053	+	+	+	+		+	
(KARS)					•				
M phase phosphoprotein 10 (U3 small nucleolar ribonucleoprotein) (MPP-	· · · · · · · · · · · · · · · · · · ·	X98494				·			
10)	· ·	• .							
M1-type and M2-type pyruvate kinase	2	X56494							
m6A methyltransferase (MT-A70)	. 7	AF014837	+	+		+			· .
mab-21 (C. elegans)-like 1 (MAB21L1)	1	U38810		+	+	+		+	
MacMarcks	1	X70326	+	+	+	+	+	+	
macrophage-associated antigen (MM130)	1	Z22968		+	+	7		+	·
					<del></del>				

MADS box transcription	1,	U49020	T	+	+	1+	1.	T +	T
enhancer factor 2,					ļ		1	1	
polypeptide A (myocyte			l	1			1		
enhancer factor 2A)				1	ļ	1	1		
(MEF2A)								<u> </u>	·
MADS box transcription	1	L08895		+	+	+		+	
enhancer factor 2, polypeptide C (myocyte	•	·	1	1.	١.	1.	1	ĺ	
enhancer factor 2C)			1	1		1			
(MEF2C)			1		ļ		-		
major cytoplasmic tRNA-	1	X17516	<u> </u>	ļ	ļ	↓	↓	<u> </u>	
Val(IAC) (=M33940)	•	X1/310	. ,		ļ			1	
major histocompatibility	1	M95531	<del> </del> -	ļ	<u> </u>	↓	<u> </u>	↓	
complex class I beta chain	•	10185551	ļ	٠.	`			1	
(HLA-B)					1	1	İ		1
major histocompatibility	41	Z93949		+	+	+	├	+	high in villous
complex, class I, A (HLA-A)		250545		'i T	i T	<b>'</b>	}.·	· •	ladenoma
major histocompatibility	1	Z72422	<del> </del>	├──	-	$\vdash$		┯	auerionia
complex, class I, A (HLA-A)	•			1			Ι.	١.	
(low match)					1	1		1	
major histocompatibility	82	M24097	+	+	+.	+	+	+	
complex, class I, C (HAL-		1		1		'	Ι'.	Ι΄.	1
(C)				1		ĺ		1	
major histocompatibility	. 77	M20022	+	+	+	+	╁	+	<del></del>
complex, class I. E (HLA-E)		1			.	l	1	'	
major histocompatibility	2	U15085	+	+	+	+	<del> </del>	-	
complex, class II, DM				1	l .		1	ľ	
BETA (HLA-DMB)					ŀ				
major histocompatibility	10	M57466	+	+	+	+		+	
complex, class II, DP beta				1	l	l	i		i ·
1 (HLA-DPB1)						1			
major histocompatibility	9 .	V00522	. +	+	+	+	<del>                                     </del>	+	
complex, class II, DR beta				1	ł	1	ŀ		
1 (HLA-DRB1)					l_	1			
Major histocompatibility	2	M24070		+	+	1	+	+	
complex, class II, Y box-			l			١.		l	
binding protein I; DNA- binding protein B (YB1)			٠.	-		ı		1	
malate dehydrogenase 1,		DEPOSA						<u> </u>	
NAD (soluble) (mdh1)	1 .	D55654	+	+	+	+	+	+	
malate dehydrogenase 1,	3	DEFEE		<u> </u>					
NAD (soluble) (MDH1)	3	D55654	ĺ	+	+		+	+	
malonyl-CoA	2	AF097832						L	
decarboxylase precursor	2	AF091032						1	
maltase-glucoamylase	1	· AF016833	<del> </del>			+	<u> </u>	<b> </b>	
(mg)	•	- AI 010033				<b>,</b>			•
manic fringe (Drosophila)	1	U94352		+	+	+	┡	<u> </u>	
homolog (MFNG)	•	054302	T		+	*		+	
mannose phosphate	1	X76057		+	+	+	<del> </del>	+	
isomerase (MPI)	•	A10007 .	1	*	Τ		ľ	, T	
mannose phosphate	2	X76057	<del></del>	+	+	+	<u> </u>	+	
isomerase (mpi)	_			'	T .				
mannose-6-phosphate	3	X56253		+	+	$\vdash$	-	-	· · · · · · · · · · · · · · · · · · ·
receptor (cation	_	.100200		, '	•		[	*	•
dependent) (M6PR)	•	•							
mannose-P-dolichol	1	AF038961		+	+	+		+	
utilitzation defect 1	•				,			'	
(MPDU1)									
mannosidase, alpha B,	1 -	U60885		+		+	+	+	
llysosomal (MANB)		,							,
mannosyl (alpha-1,3-)-	1	M55621	+	+	+	+	+	+	
glycoprotein beta-1,2-N-									
acetyiglucosaminyltransfer									
ase (MGAT1)									
map 4q35 repeat region	1	AF064849							
MAP kinase-interacting	2	AB000409		+	+	+	+	+	<u> </u>
serine/threonine kinase 1	_			·				'	
[(MKNK1) ·				ļ					
MAP/ERK kinase kinase 3	5	U78876		+					
I(MEKK3)	-			•					
MAP/ERK kinase kinase 5	1	D84476		+	+		+	-	
(MEKK5)			1		1	l			
<u>-</u>									

									C1/CA	,0,000	
MAP/microtubule affinity- regulating kinase 3 (MARK3)	4	M80359		+	+			+			
Marenostrin protein	1	Y14441	<del> </del>	<del> </del>		1	<del> </del>	├			
MASL1	1	AB016816	<del>                                     </del>	+	<del> </del>	-	-	<del> </del>	<del>                                     </del>		
MAX dimerization protein (MAD)	3	L06895		<del> </del>			<del>                                     </del>	+			
MaxiK potassium channel beta subunit	1	AF035046	<u>                                     </u>	<del> </del>		<u> </u>		-			· ·
MBP-2 for MHC binding protein 2	7 1	X65644	<u> </u>	+	+	+	<del>                                     </del>	+			•
Meis (mouse) homolog 3 (MEIS3)	. 1.	U68385		+	+	+		+			
melanoma-associated antigen p97	1	M12154		<b>-</b>	-						
(melanotransferrin)	i ).		3.0			1		ŀ	•	•	
membrane cofactor protein (CD46, trophoblast-	4	X59405		+	+	.+		+			
lymphocyte cross-reactive antigen) (MCP)										•	
membrane component.	4	D14696		+	+.	+	+	+	<del></del>		<del></del>
chromosome 17, surface marker 2 (ovarian					,						·
carcinoma antigen CA125) (M17S2)											•
endopeptidase (neutral lendopeptidase)	2	J03779	В		+	+	+	+			
enkephalinase, CALLA, CD10) (MME)											
membrane protein, palmitoylated 1 (55kD) (MPP1)	. 2	M64925		+	+ 	+	+	+			
meningioma expressed antigen (MGEA)	1	U94780				+					<del></del>
meningioma-expressed	1	U73682	+	+		+	+			•	
Menkes Disease (ATP7A) putative Cu++-transporting P-type ATPase		L06133		+			·			•	
metallothionein 2A (MT2A)	1	V00594	<del> </del>	╀┯┤	+	+	+.	+			
metaxin 1 (MTX1)	1	U46920	ļ <u>.</u>	+		+		+			
methionine	2	X68836	+	1	+	+		+			-
adenosyltransferase II, alpha (MAT2A)						·		·			
methyl-CpG binding domain protein 1 (MBD1) (non-exact 59%aa)	1	Y10746		2							
methylene tetrahydrofolate dehydrogenase (NAD+	2	X16396	+	+	+	+	·	+		٠.	
dependent), methenyltetrahydrofolate									٠.		
cyclohydrolase (MTHFD2)				L I	[						
methylenetetrahydrofolate dehydrogenase (NADP+ dependent).	1	J04031		+	+	+	+	+			•
methenyltetrahydrofolate cyclohydrolase						·					
formyltetrahydrofolate synthetase (MTHFD1)					•				•		
methyltransferase, putative	2	AJ224442	<del></del>					$\dashv$			
MHC antigen (HLA-B) (=L42024)	. 1	U14943					-				
MHC class 1 region	2	AF055066	<del></del>	<del>   </del>				$\dashv$			
MHC class I antigen (HLA-A2)	1	U70863			_			<del>-  </del>			<u> </u>
MHC class I antigen (HLA-A33)	1	U19736						7			•
MHC class I antigen (HLA-C)	1	U38975						$\dashv$			
			· <del></del>								

WO 00/40/49	•							•	CI/CA00/00003
MHC class I antigen B*5801 (HLA-B)	1	U52813							
MHC class I antigen HLA-A (HLA-A)	2	AF015930							
MHC class I antigen HLA-A (HLA-A-2402 allele)	1	U36687							
MHC class I antigen HLA-	2	X13112						_	
MHC class lantigen HLA-B (B*0801 variant) (=AF028596)	1	U67331							
MHC class I antigen HLA-B (B*0801 variant) (=U88254)	1 .	. U67330			• (				
MHC class I antigen HLA-B (B*48 allele)	1	AF017328							
KHC Wass hentigen HLA-S (HLA-B*1502 allele)	\$ .	- i⊼F014770				3.1			
MHC class I antigen HLA-B (HLA-B*40MD)	1	U58643							
MHC class I antigen HLA-B (HLA-B*4103 allele)	1	AF028596							
MHC class I antigen HLA-B gene (HLA-B*4402 variant allele)	1	AF035648		·					
MHC class I antigen HLA-B GN00110-B*3910	1	U52175							·
MHC class I antigen HLA- Cw*04011	1	D83030					·		
MHC class I antigen R69772 HLA-A (A*0302)	. 1	U56434							·
MHC class I antigen SHCHA (HLA-B*4403 variant)	1	U58469							
MHC class I histocompatibility antigen (HLA-B) (clone C21/14)	1	U06697							
MHC class THLA B71	2 .	L07950		_		<del> </del>	-	<del>                                     </del>	· · · · · · · · · · · · · · · · · · ·
MHC class I HLA-A (Aw33.1)	1	Flp					_	T	
MHC class I HLA-B	1	U18660	· · · · · · · · · · · · · · · · · · ·	1		$\vdash$	_		
MHC class I HLA-B (HLA-B-07ZEL allele) (=X867Q4)	1	U18661				T			*
MHC class I HLA-B (HLA- B-08NR allele)	1	U28759							
MHC class I HLA-B*3512	1	L76094				1			
MHC class I HLA-B41 variant (=U17572)	3	U17572						-	
MHC class I HLA-B44.2 chain	1	M24038							
MHC class I HLA-B51- cd3.3	1	L41086			·				
MHC class I HLA-C allele	2	Z33459							
MHC class I HLA-Cw*0304 (=M84172; M99389)	1	D64150							
MHC class THLA-Cw*0803	3	Z15144							
MHC class I HLA-Cw6	1	M28206							
MHC class I HLA-J antigen	1	L56139			·				
MHC class I lymphocyte antigen A2 (A2.1) variant DK1	1	M19670		·			Ŀ		-
MHC class I mic-B antigen	1	X91625							
MHC class I polypeptide- related sequence A (MICA)	1	L14848				+			
MHC class I protein HLA-C heavy chain (C*0701new allele) (=AF017331)	1	U61274							
MHC class II DNA Sequence (clone A37G7- 1C11)	1	L18885							

MHC class II DQ-alpha associated with DRw6.	. 1	M16995	+ -	Γ.	. + .	+	1	+	
DQw1 protein MHC class II DQ-beta						<u></u>			
associated with DR2,	2	M17564		+		+		+	
MHC class II HAL-DQ-	1 .	M33842		÷			-	<del> </del>	
LTR5 (DQ,w8) DNA fragment, long terminal						Ì.			
repeat region MHC class II hla-dr alpha-	1	J00195		ļ.	<u> </u>	_			<u> </u>
chain (=J00197;M60334;K01117		1,50		1		}	1		•
1;J00194;M60333;X00274) MHC class II HLA-DRB1		A F NA Z A NA						•	* * *
MHC class II HLA-DRW11-	1	AF007883 M21966	ļ	<u> </u>		_			
beta-I chain (DRw11.3)						·			
MHC class Il lymphocyte antigen (DPw4-beta-1)	. 1	M23907		Ī -					
MHČ CLASS II TRANSACTIVATOR CIITA (non-exact 57%)	1	P33076					,	٠	9
MHC HLA-E2.1 (=X87679)	1	M32507		<del> </del>	-			-	
MHC HLA-E2.1 (alpha-2 domain) (low match)	त ्	M32507	· · · ·						
Mi-2 autoantigen 240 kDa protein (non-exact 84%)	1	U08379							
microsomal stress 70 protein ATPase core (stch)	1	U04735		-		-		<u> </u>	
microtubule-associated protein 4 (MAP4)	1	U19727	+	+	+	+		+	
microtubule-associated	. 1	X73882		<del>                                     </del>				1	`
protein 7 (MAP7) mineralocorticoid receptor	2	M16801	· .	+		+		+	·
(aldosterone receptor) (MLR)			·			,		•	
minichromosome maintenance deficient (S. cerevisiae) 3 (MCM31)	1.	X62153		+	+	+		+	
minichromosome maintenance deficient (S.	1,	AB011144		+	+	+	-	+	
cerevisiae) 3-associated protein (MCM3AP)				·			-		
minichromosome maintenance deficient (S.	2	X74795	+ :	+	+	+	+	+	
cerevisiae) 5 (cell division cycle 46) (MCM5)									
mitochondiral cytochrome b (CYTB)	1	AF042517							
mitochondrial 16S rRNA	. 11	Z70759				$\dashv$			
mitochondrial ATP synthase (F1-ATPase) alpha subunit	2	X59068							
mitochondrial ATP synthase c subunit (P1	1 .	X69907					-		
form) mitochondrial cytochrome b	6	AF042508					$\dashv$	-	<u> </u>
(CYTB) mitochondrial cytochrome b	1	AB006202				$\dashv$	_	-	
small subunit of complex II mitochondrial CYTOCHROME C	1	P00395					-		
OXIDASE POLYPEPTIDE I									
mitochondrial CYTOCHROME C	1	P00403		•					
OXIDASE POLYPEPTIDE	•								
mitochondrial cytochrome C oxidase subunit II	2	P00403			$\neg \dagger$			$\dashv$	
				لسبا				1	

mitochondrial cytochrome oxidase subunit II (COII)	5	U12691		1	_	T = T		1	-			_
				1		ŀ				•		
(=U12692 Hsa4 mitochondrion cytochrome loxidase subunit II)	:					ļ. · .		· 		••		
Oxidase suburil II)						_			<u> </u>		<u> </u>	
milochondrial DNA loop attachment sequences (clone LAS34)		X89763										
mitochondrial DNA		U94703	<del></del>	+-	+	+	├	┼	<del>}                                    </del>			
polymerase accessory subunit precursor (MtPolB)	,	:				· .						
nuclear gene encoding mitochondrial protein.			٠.	· .						*		
mitochondrial DNA,	7	X93334		+	-	╁	$\vdash$	-	-			
complete genome			İ		.		l					
mitochondrial genes for,	8 <sub>.,</sub>	V00710 -						,				
several tRNAs (Phe, Val, Leu) and 12S and 16S ribosomal RNAs					·							
mitochondrial genes for	3	V00660		<del> </del>	├	+-	<del> </del>	-	<del></del>			
tRNA (Phe) and 12S rRNA (fragment)												
mitochondrial inner	1	AF106622	· · · · · ·	1		_	$\vdash$		<u> </u>			
membrane preprotein			٠.			-[	· ·	1	1		٠.	
translocase Tim17a	·	ALOZOPOS		ļ .	·	<u> </u>						
cytochrome b(CYTB)	7	AF042503										
mitochondrial loop	1	X89843		<del> </del> -		_	_	<b></b> -				
attachment sequence (clone LAS88)		A08043							· .			:
mitochondrial NADH	. 14	AF014893	<u> </u>	<b> </b>			<u> </u>	<del> </del>	ļ			
dehydrogenase subunit 2 (ND2)	. 14	AI 014083									•	
mitochondrial translational initiation factor 2 (MTIF2)	. 1	L34600		+	+	+		+				
mitochondrion cytochrome b	1	U09500				1						
mitogen inducible gene mig-2	1	Z24725	*	+	+	+		+				
mitogen inducible gene mig-2 (non-exact, 71%)	1	Z24725										
mitogen-activated protein kinase-activated protein kinase 3 (MAPKAPK3)	2	U43784		+	+	+		+				
MLN51	-2	X80199		+	+	+	+	+	-			
MLN64 (=D38255 CAB1)	1	X80198	+	+	+-	+	<u> </u>					
moesin (MSN)	14	M69066	+	+	+	+		+				—
monocytic leukaemia zinc												
finger protein (MOZ)	2	U47742		+	+	+		+				
1	2	U29165										
motor protein (Hs.78504)	2	D21094	9 +·	+	+	+		+				
mouse double minute 2, human homolog of; p53-	1	U39736	<del></del>		+	+						
binding protein (MDM2) M-phase phosphoprotein 6	1	X98263		+	+	+		+				
(MPP-6) M-phase phosphoprotein,	1	X98260								· 	•	<i>:</i>
mpp11 MPS1	1	L20314										
Mr 110,000 antigen	2	D64154	<u> </u>	+		+	+	+				
MRC OX-2, V-like region (=M17227)	1	X05324	<u> </u>		•		<b>T</b>	7			· · · · ·	
mu-adaptin-related protein-	1	Y08387	<del></del>	-		$\vdash$						$\dashv$
2; mu subunit of AP-4 (MU-ARP2) multifunctional polypeptide		V/2-7-2-							٠			
similar to SAICAR synthetase and AIR carboxylase (ADE2H1)	1	X53793	+	+	+	+		+				

WO 00/40749	_							PC	1/CA00/00005
murine leukemia viral (bmi- 1) oncogene homolog	1	L13689	•	+		+.		+	
(BMI1) mutant (Daudi) beta2 - microglobulin	44	X07621.							
mutated in colorectal cancers (MCC)	1	M62397	. 2.	+	+			+	
myeloid cell leukemia sequence 1 (BCL2-related)	9	L08246	+	+	+	+	+	-	
myeloid cell nuclear differentiation antigeN (MNDA)	11	M81750	+					+	í
myeloid differentiation primary response gene (88) (MYD88)	4	U70451		+	+	+		+	
myeloid leukemia factor 2 (MLF2)	3	U57342		+		+		+	
myeloid/lymphoid or mixed- lineage leukemia (trithorax (Drosophila) homolog); translocated to, 7 (MLLT7)	8	U89867		+	+	+		+	
MYH9 (cellular myosin heavy chain)	1	M81105							
myomesin (M-protein) 2 (165kD) (MYOM2)	1	X69089			•				
myosin IE (MYO1E)	11	X98411		+		+			
myosin light chain kinase (MLCK)	1	U48959	+		+	+		+	
myosin phosphatase, target subunit 1 (MYPT1)	2	D87930		+	+	+		+	·
myosin regulatory light chain (=U26162)	. 2	D50372					·		
myosin VIIa (low match 71)	1	U55208							
myosin, heavy polypeptide 9, non-muscle (MYH9)	3	M81105	+	+	+	+		+	
myosin, light polypeptide, regulatory, non-sarcomeric (20kD) (MLCB)	6	X54304	+	+	+	+	+	+	
myosin-I beta	1	X98507	+	+	+	+		+	
myristoylated alanine-rich protein kinase C substrate (MARCKS, 80K-L) (MACS)	1	D10522		+	*	·			
myxovirus (influenza) resistance 1, homolog of murine (interferon-inducible protein p78) (MX1)	1	M30817	*	+	+	+		+	
myxovirus (influenza) resistance 2, homolog of murine (MX2)	3	M30818			+				
N-acetylgalactosaminidase, alpha- (NAGA)	2	M62783		+	+		+	+	
N-acetylglucosamine receptor 1 (thyroid) (NAGR1)	1	L03532		+	+	+		+	
NACP/alpha-synuclein	2	U46896							<u> </u>
N-acylaminoacyl-peptide hydrolase (APEH)	1	D38441		+	+		<b>+</b>	+	
N-acylsphingosine amidohydrolase (acid ceramidase) (ASAH)	11 .	U47674	+	+	+	+		+	
NAD+-specific isocitrate dehydrogenase beta subunit precursor (encoding mitochondrial protein)	1	U49283	<b>+</b>	+	+	+	•	+	
NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 5 (13kD, B13) (NDUFA5)	1	U53468.1	+	+	+	+	+	+	

·									•
NADH dehydrogenase	1	AF047181		+	+	+	+	+	
(ubiquinone) 1 beta		•			1			1	
subcomplex, 5 (16kD, SGDH) (NDUFB5)		1,1		.	٠ ا		l	ŀ	
NADH dehydrogenase	1	AF050640		+	+	+	+	_	
(ubiquinone) Fe-S protein 2		WL090040		T .	*	*	*	+	
(49kD) (NADH-coenzyme			ľ		١	١.			
Q eductase) (NDUFS2)			Ī		ł			ł	
NADH dehydrogenase	1	M22538	-37-		+	. +	+	+	
(ubiquinone) flavoprotein 2		;			,			1	
(24kD) (NDÚFV2)							L		
NADH:ubiquinone	2	AF053070	. +	+	+	+	+	+	`
dehydrogenase 51 kDa					'		1	1	
subunit (NDUFV1) NADH-CYTOCHROME 85		P00387		ļ			_	_	
REDUCTASE (B5R)								'	1
(50%aa)	,	:		) · · · · · · · · · · · · · · · · · · ·		1		P 1	'Ì
NADH-UBIQUINONE	1	P03886	<del></del>					-	
OXIDOREDUCTASE				1	i	Ι.			
CHAIN 1									
Nardilysin (N-arginine	. 2	U64898	+ +	+	+	+		+	
dibasic convertase)	,					1			
(NRD1)		VONABA			<u> </u>	<u> </u>	<u> </u>	<u> </u>	· · · · · ·
associated complex alpha	. 5	X80909		+	+		+	+	9
polypeptide (NACA)						1	l	I	
natural killer cell group 7	8.	S69115		<del> </del>	<del>-</del>	+	H÷	+	<del> </del>
sequence (NKG7)						*			
natural killer cell transcript	. 19	M32011	+		<del>                                     </del>	1	$\vdash$	<del>                                     </del>	<del> </del>
4 (NK4)	·	L	1			I	1	Ι.	'
natural killer-associated	. 1	U30274	+				$\Box$	<u> </u>	blood only
transcript 3 (NKAT3)							L.	Ŀ	
natural killer-associated	1	AF022045	+						blood only
transcript 5 (NKAT5)	1	L04288		<u> </u>	<u> </u>	<b></b>	<del> </del>	L.	
recognition sequence	'	LU4200	В		+		+	+	
(NKTR)						l <sup>'</sup>	1.		
N-deacetylase/N-	2	AF042084	+	. +		+	<del> </del>	+	
sulfotransferase (heparan						l .	1	l .	
glucosaminyl) 2 (NDST2)	•					L	L		
Ndr protein kinase	3	Z35102	·	+		l .			
Nedd-4-like ubiquitin-	1	U96113				$\vdash$	$\vdash$	$\vdash$	
protein ligase WWP1			<u> </u>		:	L	L	L .	·
nel (chicken)-like 2	3	D83018		+	+	Γ.			
(NELL2)		I MARKET					<u> </u>	<u> </u>	
N-ethylmaleimide-sensitive factor attachment protein,	1	U39412		+			+		• .
alpha (NAPA)	·					Ì .	l	1	
N-ethylmaleimide-sensitive	1	U78107		+	+	+	<u> </u>		
factor attachment protein.	•	5/5/0/					Ī		T . W.
gamma (NAPG)		•						·	
neural precursor cell	3	X92544	+.	+	+	+		+	high in testis
expressed.	•					İ			
developmentally down-					l		1	ł	
regulated 5 (NEDD5) neural precursor cell		Dagaga			لبنا	L		<u> </u>	
	1	D23662	+	+	+	+	+	+	[ .
IPAULGEOU								ŀ	
expressed, developmentally down-								1	1
developmentally down- regulated 8 (NEDD8)									1 .
developmentally down- regulated 8 (NEDD8)	1	U02330		+		+	+	_	·
developmentally down- regulated 8 (NEDD8) neuregulin 1 (NRG1)		U02330					+		
developmentally down- regulated 8 (NEDD8) neuregulin 1 (NRG1) neuroblastoma RAS viral	1	U02330 AB020692	+ .	+	+ .	+	+	+	
developmentally down- regulated 8 (NEDD8) neuregulin 1 (NRG1) neuroblastoma RAS viral (v-ras) oncogene homolog (NRAS)			+		+		+	+	-
developmentally down- regulated 8 (NEDD8) neuregulin 1 (NRG1) neuroblastoma RAS viral (v-ras) oncogene homolog (NRAS) Neuroblastoma RAS viral			+		+		+	+	
developmentally down- regulated 8 (NEDD8) neuregulin 1 (NRG1) neuroblastoma RAS viral (v-ras) oncogene homolog (NRAS) Neuroblastoma RAS viral (v-ras) oncogene homolog	4	AB020692	+		+ .		+	+	
developmentally down- regulated 8 (NEDD8) neuregulin 1 (NRG1) neuroblastoma RAS viral (v-ras) oncogene homolog (NRAS) Neuroblastoma RAS viral (v-ras) oncogene homolog (NRAS) (low match)	1	AB020692 X68286	<b>.</b>		+		+	+	
developmentally down- regulated 8 (NEDD8) neuregulin 1 (NRG1) neuroblastoma RAS viral (v-ras) oncogene homolog (NRAS) Neuroblastoma RAS viral (v-ras) oncogene homolog (NRAS) (low match) Neurofibromin 2 (bilateral	4	AB020692	•		+ .		+	+	
developmentally down- regulated 8 (NEDD8) neuregulin 1 (NRG1) neuroblastoma RAS viral (v-ras) oncogene homolog (NRAS) Neuroblastoma RAS viral (v-ras) oncogene homolog (NRAS) (low match) Neurofibromin 2 (bilateral acoustic neuroma) (NF2)	1	AB020692 X68286 S73853		+	+			+	
developmentally down- regulated 8 (NEDD8) neuregulin 1 (NRG1) neuroblastoma RAS viral (v-ras) oncogene homolog (NRAS) Neuroblastoma RAS viral (v-ras) oncogene homolog (NRAS) (low match) Neurofibromin 2 (bilateral acoustic neuroma) (NF2) neuronal apoptosis	1	AB020692 X68286	+	+	+.				
developmentally down- regulated 8 (NEDD8) neuregulin 1 (NRG1) neuroblastoma RAS viral (v-ras) oncogene homolog (NRAS) Neuroblastoma RAS viral (v-ras) oncogene homolog (NRAS) (low match) Neurotibromin 2 (bilateral acoustic neuroma) (NF2) neuronal apoptosis inhibitory protein (NAIP)	1 2	X68286 S73853 U19251		+ .		+	+	+	
developmentally down- regulated 8 (NEDD8) neuregulin 1 (NRG1) neuroblastoma RAS viral (v-ras) oncogene homolog (NRAS) Neuroblastoma RAS viral (v-ras) oncogene homolog (NRAS) (low match) Neurofibromin 2 (bilateral acoustic neuroma) (NF2) neuronal apoptosis	1	AB020692 X68286 S73853		+	+ .			+	

WO 00/40749	•	•							
neuropathy target esterase (NTE)	1	AJ004832		+.	+	+		+	í.
neuropeptide Y3 receptor, 5'UTR (low score)	1	D28433							
neurotrophic tyrosine kinase, receptor, type 1 (NTRK1)	14 .	X03541	+	+	+	+	+	+	
neutrophil cytosolic factor 4 (40kD)	2	U50720		·					
NG31	. 1	AF129756							
NGAL (=X83006)	1	X99133						′	•
nibrin (NBS)	1.	AF051334							
NIK	1	AB014587		+	+	+		+	
Ninjurin 1; nerve injury- induced protein-1	1	U72661		+	+	+		+	
nitrilase 1 (NIT1) (=AF069984)	1	AF069987				· _			
NKG2-D (low match) (non- exact, 58%)	1	X54870		-				,	
Nmi	1	U32849							
N-myristoyltransferase 1 (NMT1)	1	AF043324		+	+	+	+	+	
No arches-like (zebrafish) zinc finger protein (NAR)	1	U79569	·	+	+	+		+	
non-histone chromosome protein 2 (S. cerevisiae)- like 1 (NHP2L1)	1	D50420	+	+	+	+	+	,	
non-muscle (fibroblast) tropomyosin	1								
non-muscle alpha-actinin	1	U48734		1					
non-muscle myosin alkali light chain (Hs.77385)	- 3	M22918	+	+	+	.+.	+	+	High in fetal adrenal gland and BPH stroma
non-neuronal enolase (EC 4.2.1.11)	1	X16289					1.		7
non-receptor tyrosine phosphatase 1	1	M33689							
normal keratinocyte substraction library mRNA, clone H22a	. 3	X53778	+	+	+	+	+	+	high in many libraries
notch group protein (N)	3	M99437		1					
novel protein	1	X99961		T					•
novel T-cell activation protein	1	X94232		+	+	+		+	·
N-ras protein NRU	1	A60196							
N-sulfoglucosamine sulfohydrolase (sulfamidase) (SGSH)	1	U60111		+				+	
insulin induced gene 1 (INSIG1)	1	U96876	+	+	+	+	+	+	
ntegrin, alpha 4 (antigen CD49D, alpha 4 subunit of VLA-4 receptor) (ITGA14)	3	L12002	+			1			
nterferon, gamma-inducible protein 16 (IFI16)	1	M63838	+	+	+	1,*		+	
nterleukin 1, beta (IL1RB)	1	M15330	-		<b>-</b>	+	$\vdash$	1	1
nuclear antigen H731-like	2	U83908		+	+	+	T	+	
nuclear antigen Sp100 (SP100)	4	U36501	+			+	+	+	
Nuclear antigen Sp100 (SP100) (85%aa)	1	P23497			T	$\top$	1	Γ	
Nuclear antigen Sp100 (SP100) (89%aa)	1	P23497	<u> </u>		1	T		1	
nuclear autoantigenic sperm protein (histone- binding) (NASP)	1 .	M97856	+		+				

		•						
1	U78773	2						
4	U22897	+	+	+	+	+	-	
- 1	574017		1	_	1	-		
<u> </u>			1		Ľ	·		
2	M58603		•	*		*	*	
3	M69043		+	+	+		+	
	U08191		+	+	+	,	+	
3	Z11583	+	+	+	+	+	+	
1	X97674	100	Ī.			-		
2	AF010227	+	+	+			+	
22	X77548	-11	+	+	+	+	+	
1 .	X84373		+		+		+	
1	U02683	В	+	+				·
4	U90426	+	+	+	+		+	
1	X59711	В						
			+	+		+		
1	X07315	+	+		+		+	
1	U31338	·						
	M96824	+	+	+	+		+	•
1	Z34289		+	+				
1	Y12065	+	+	+	+		+	
1	AF015308							
. 1	M32110	+	+				·	
1	U86602	+.	+	+	+		+	
2	M60858	+	+	+	+		+	,
14	M28699	+	+	+	+		+	
1	U41742							
2	L41840							
1	Z25535							
1	U41815							
	•							
-								
. 4	077430		<b>T</b>	•	. 🕇		+	
	1 2 3 1 2 22 1 1 1 4 3 1 2 1 1 1 1 2 1 4 1 1 2 1 4 1 1 2 1 4 1 1 2 1 4 1 1 1 2 1 1 1 1	4 U22897 1 S74017 2 M58603 3 M69043 1 U08191 3 Z11583 1 X97674 2 AF010227 22 X77548 1 X84373 1 U02683 4 U90426 1 X59711 3 U15306 1 X07315 1 U31338 2 M96824 1 Z34289 1 Y12065 1 AF015308 1 M32110 1 U86602 2 M60858 14 M28699 1 U41742 2 L41840 1 Z25535 1 U41815 1 D28430 1 M86667	4 U22897 + 1 S74017 2 M58603  3 M69043  1 U08191  3 Z11583 + 1 X97674  2 AF010227 + 22 X77548 1 X84373 1 U02683 B 4 U90426 + 1 X59711 B 3 U15306 1 X07315 + 1 U31338 2 M96824 + 1 Z34289 1 Y12065 + 1 AF015308 1 M32110 + 1 U86602 + 1 U86602 + 1 U41742 2 L41840 1 U25535 1 U41742 2 L41840 1 Z25535 1 U41815 1 D28430 1 M86667	4 U22897 + + 1 S74017 + 2 M58603 +  1 U08191 + 3 Z11583 + + 1 X97674 + 2 AF010227 + + 22 X77548 + 1 X84373 + 1 U02683 B + 4 U90428 + + 1 X59711 B 3 U15306 + 1 X07315 + + 1 U31338 + 2 M96824 + + 1 Z34289 + 1 Z34289 + 1 Y12065 + + 1 AF015308 + 1 M32110 + + 1 U86602 + + 1 U86602 + + 1 U86602 + + 1 U86602 + + 1 U86602 + + 1 U86602 + + 1 U86602 + + 1 U86602 + + 1 U41742 + 2 L41840 + 1 U41742 + 2 L41840 + 1 U41742 + 2 L41840 + 1 U41815 + 1 U28430 + 1 M86667 + +	4 U22897 + + + + + + + + + + + + + + + + + + +	4 U22897 + + + + + + + 1 S74017 + + + + + + + + + + + + + + + + + + +	4 U22897 + + + + + + + + 1 S74017 + + + + + + + + + + + + + + + + + + +	4

nucleosome assembly protein, 5'UTR	. 1	D28430	T	Τ.		T	Ţ.	T	
olfactory receptor (OR7-		U86281	<del> </del>	-		$\vdash$	├-	<del>  -</del>	
0LFACTORY RECEPTOR-	Ē	20/000							
LIKE PROTEIN HGMP07E (OR17-4) (non-exact 65%)	1	P34982							
oligodendrocyte myelin	7	L05367	<u> </u>	+		+-	┼	┼	1.
glycoprotein (OMG) O-linked N-	1	U77413	+	<u> </u>	L	<u>Ļ</u> .	<u> </u>	ļ.,	
acetylglucosamine (GlcNAc) transferase	•	077413	T	+		*	+	+	E
(UDP-N- acetylglucosamine:polypep tide-N-acetylglucosaminyl transferase) (OGT)									
oncofetal trophoblast glycoprotein 5T4 precursor (non-exact 55%)	1	A53531							
Oncogene TIM (TIM) (non- exact 84%)	1	U02082	,	†					
ORF (Hs.77868)	1	M68864	+	+	+	+	+	+	
ORF1; MER37; putative transposase similar to pogo	1	U49973							
element Length = 454		·			,	ļ ·			ľ
origin recognition complex, subunit 2 (yeast homolog)- like (ORC2L)	2	U27459				+			
origin recognition complex, subunit 4 (yeast homolog)- like (ORC4L) (low match)	1	AF022108			·				
ornithine aminotransferase (gyrate atrophy) (OAT)	2	M23204		+	+	+,			
ornithine decarboxylase (ODC)	. 1	M20372		$\vdash$	-				
omithine decarboxylase antizyme, ORF 1 and ORF.	11	D78361	+	+	+	+	+	+	High in pancreas, and activated T cells
orphan receptor (Hs.100221)	. 2	U07132	+	+	+	+		+	
OS-9 precurosor	6	AB002806	+	+	+ .	+	+	+	
osteonectin (=X82259 BM- 40)	. 1	D28381							*
ovel centrosomal protein RanBPM (RANBPM)	1	AB008515		+	+	+		+	
over-expressed breast tumor protein	1	L34839			٠				
oviductal glycoprotein 1, 120kD (OVGP1)	1	U09550			+	+	+		
oxidase (cytochrome c) assembly 1-like (OXAIL)	1	X80695		+	+	+	+	+	
oxoglutarate dehydrogenase (lipoamide) (OGDH)	4	D10523		+	+		+	+	x
oxysterol binding protein (OSBP)	1	M86917	+	+		_	+		
OZF	1	X70394		+	+	+		+	
OZF (non-exact zinc finger)	1	X70394				$\vdash$			
p21/Cdc42/Rac1-activated kinase 1 (yeast Ste20- related) (PAK1)	2	U51120	+	+		+		_	
P35-related protein (= S80990 ficolin)	1	D63392							
p40	1	U93569		├		-	-		
p40phox (=U50720)	1	X77094							
P47 LBC oncogene	4	U03634		<del>                                     </del>			$\dashv$		
p53-induced protein (PIG11)	1	AF010315	+	+	+	+			
p54nrb (low match)	1	Y11287		<del>                                     </del>					

p62 nucleoporin		· VERMO							
	1	X58 <b>521</b>							10
p63 mRNA for transmembrane protein	1	X69910	+	+	+	+		+	•
PAC clone DJ0701016 from 7q33-q36 (non-exact 54%)	1.	Q07108					T	-	
palmitoyl-protein thioesterase (ceroid-	10	U44772		+	+	:+	-	+	
lipofuscinosis, neuronal 1, infantile; Haltia-Santavuori disease) (PPT)		,							ŷ
papillary renal cell carcinoma (translocation- associated) (PRCC)	1	. X99720	+	+	+	+	+	+	
PAR protein	1	AF115850		++-	<del> </del>	╁	<del>                                     </del>	├	·
partar ESV (clone c-1gh04)	711-97 2	Z43627		·		¥	<del> </del>	1	j
PAX3/forkhead transcription factor gene fusion	1	U02368					_		
paxillin (PXN)	4	D86862		+	+	+	-	+	
PBK1 protein	2	AJ007398	+	+	+	+		+	
PBS-EST (nz92e01.s1	1	AA732534	<del> </del>	+-	$\vdash$	<del> </del>	⊢	Ļ	
NCI_CGAP_GCB1 clone IMAGE:1302936) (low score)									
PDZ domain protein (Drosophila inaD-like) (INALD)	1	AJ224747	+			+		+	
PEBP2aC Runt domain encoding gene (=Z35728)	1	Z38108							
peptidase D (PEPD)	. 1	J04605		İ			T-	<u> </u>	
peptidylprolyl isomerase A (cyclophilin A) (PPIA)	. 3	Y00052		+	+	+	+	+	high in many libraries
peptidylprolyl isomerase D (cyclophilin D) (PPID)	2	L11667		+	+		+	+	÷
peptidylprolyl isomerase E (cyclophilin E) (PPIE)	1	AF042386		+	+		+	+	
PERB11.1 (=U56942 MHC class I chain-related protein A)	1	U69630							
perform 1 (preforming protein) (PRF1)	14	M28393	-10	1.					
peroxisomal acyl-CoA thioesterase (PTE1)	2	X86032							
Peroxisomal acyl- coenzyme A oxidase	. 1	X71440		+	+	+	+	+	
peroxisomal famesylated protein (PXF) phorbol-12-myristate-13-		X75535		+	+	+	+	+	* .
acetate-induced protein (PMAIP1)	1	D90070	B, W						
phosphate carrier (mitochondrial gene?)	1	X77337							
Phosphate carrier, mitochondrial (PHC)	3	X60036	+	+	+	+		+	
phosphate cytidylyltransferase 1, choline, alpha isoform (PCYT1A)	1	L28957			+		+		
PHOSPHATIDATE CYTIDYLYLTRANSFERAS E (CDP-DIGLYCERIDE)	1	Q92903	. 00						
phosphatidylinositol 3- kinase delta catalytic subunit	2	U57843							
phosphatidylinositol 4- kinase, catalytic, beta polypeptide (PIK4CB)	3	AB005910	+	+	1	+		+	
phosphatidylinositol glycan, class H (PIGH)	1	L19783		+	+	+	Ŧ	+	

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phosphatidylinositol transfer protein (PI-TPbeta)	2	D30037				T	T	Ι.	
phosphatidylinositol	2	X98654	В, Т	+	1	+	+	+	
transfer protein, membrane-associated (PITPNM)			lymphoma						
phosphatidylinositol	1	X98654	<u> </u>	<del>                                     </del>	<del> </del> —	-		-	
transfer protein, membrane-associated									
(PITPNM) (non-exact 64%) phosphatidylinositol-4-	1	U14957			+	┼-	+	-	
phosphate 5-kinase, type II, alpha (PIP5K2A)									
phosphatidylinositol-4- phosphate 5-kinase, type II, beta (PIP5K2B)	1	U85245	-	+	+	+		+	
phosphodiesterase 7A (PDE7A)	. 1	L12052	B, W	+	+	+-	+	<del> </del>	
phosphodiesterase IB (PDES1B)	1	U56976		ON	LY	╁	$\vdash$	-	
phosphoglucomutase 1 (PGM1)	2	M83088		+	+.	+		+	
phosphogluconate dehydrogenase (PGD)	1	U30255	-		+	-	$\vdash$	-	
phosphoglycerate kinase 1 (PGK1)	12-	V00572	<del> </del>		-	-	<del> </del>		
phosphoglycerate mutase 1 (brain) (PGAM1)	3	J04173	+	+	+	+	+	+	
phosphoglycerate mutase 2 (muscle) (PGAM2)	1	M55673		+.	+		<u> </u>	+	
phosphoinositide-3-kinase, catalytic, alpha polypeptide (PIK3CA)	1	Z29090		+	+	+	, 4		
phosphoinositide-3-kinase, catalytic, delta polypeptide (PIK3CD)	4	U86453		+	+	+		+	
phosphoinositide-3-kinase, catalytic, gamma polypeptide (PIK3CG)	1	X83368				·			
phospholipase C	1 .	X14034				<del></del>	-	-	· .
phospholipase C, delta 1 (PLCD1)	2	U09117		+	+	+		+	
phospholipase C, gamma 1 (formerly subtype 148) (PLCG1)	. 1 . "	M34667	+	+	+	+		+	
phospholipid scramblase	1	AF008445				<del>                                     </del>			
phosphoribosyl pyrophosphate synthetase- associated protein 1		D61391		+	+			+	
(PRPSAP1) phosphoribosylglycinamide	3	X54199		+	+	+	+	+	:
formyltransferase, phosphoribosylglycinamide synthetase,					·	·			
phosphoribosylaminoimida zole synthetase (GART)									
phosphorylase kinase, alpha 2 (liver), glycogen storage disease IX	3	D38616		+	+	+	+	+	
(PHKA2) phosphorylase, glycogen;	7	U47025	. +	+	+			+	
phosphorylase, glycogen;	1	U47025					·		
brain (PYGB) (low match, non-exact, 75%)	•					·			
phosphorylase, glycogen; liver (Hers disease, lycogen storage disease		Y15233		+	+	+		+	
type VI) (PYGL) phosphorylation regulatory	2								
protein HP-10 phosphotidylinositol		Dalvase						_	·
transfer protein (PITPN)	1	D30036	+	+	+	+		+	·

pigment epithelium-derived factor (PEDF)	1	U29953	T +	+	+	+	+	T +	
pim-1 oncogene (PIM1)	1	M24779	+	+	+	-	-	+	
pinin, desmosome associated protein (PNN)	1.	U77718		В	, mon	ocyt	e, T	lymp	homa
placenta (Diff33)	.5	U49188		+	+	+	Т	+	T
placenta (Diff33) (non- exact, 69%)	1	U49188							
placenta (Diff48)	18	.U49187	+	+		-	┢	╆	
placenta (Diff48) (low match)	1	U49187		1					
placenta(Diff48) (low match)	1 .	U49187		1					
plasminogen activator, urokinase receptor	1	X74039		+		+	_	+	
(PLAUR)							ĺ		
platelet factor 4 (PF4) platelet/endothelial cell	1	M25897			+			+	
adhesion molecule (CD31 ntigen) (PECAM1)	8	M37780		+	+	+	+	+	
platelet-activating factor acetylhydrolase 2 (40kD) (PAFAH2)	4	U89386	. *	+	+	+			
platelet-activating factor acetylhydrolase, isoform ib, alpha subunit (45kD) (PAFAH1B1)		U72342	+	+	+	+	+.	+	
platelet-activating factor receptor (PTAFR)	. 1	D10202		+				+	
pleckstrin (PLEK)	10	X07743	<del> </del>	1	+	+		+	
pleckstrin (PLEK) (low match)	1	X07743	† · · · · · ·						
pleckstrin homology, Sec7 and coiled/coil domains 1(cytohesin 1) (PSCD1)	4	M85169	+	+		+		+	·
pleckstrin homology, Sec7 and coiled/coil domains, binding protein (PSCDBP)	4	L06633	+		·	+		·	
pM5 protein	1	X57398	+	+	+	+	_	+	
PMP69	2	Y14322	<del></del>			_			
poly (ADP-ribose) polymerase (NAD (+) ADP- ribosyltransferase) (=X16674)	1	X56140	-	·					
poly(A) polymerase (PAP)	1	X76770	+	+	+	+		+	
poly(A)-binding protein-like 1 (PABPL1)	19	Y00345	+	+	+	+	+	+	
poly(rC)-binding protein 1 (PCBP1)	3	X78137	+	+	+	+	+	+	•
polyadenylate binding protein	1	U75686				1			
polycystic kidney disease 1 (autosomal dominant) (PKD1)	5	U24498							
polymerase (DNA directed), beta (POLB)	1	D29013		+		$\dashv$	+	+	· · · · · · · · · · · · · · · · · · ·
polymerase (DNA directed), gamma (POLG)	6	D84103				$\dashv$	$\dashv$	$\dashv$	
polymerase (RNA) II (DNA directed) polypeptide A (220kD) (POLR2A)	1	X63564	+	+	+	+	+	+	
polymyositis/scleroderma autoantigen 2 (100kD) (PMSCL2)	1	L01457	+	+	+	+	+	+	
polypynmidine tract binding protein (heterogeneous nuclear ribonucleoprotein I) (PTB)		X65372	+	+	+	+	+	+	

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positive regulator of programmed cell death ICH-1L (Ich-1)	3	U13021		· .					
postmeiotic segregation increased 2-like 12 (PMS2L12)	1	M16514	+	+	+	+		+	
postmeiotic segregation increased 2-like 8 (PMS2L8)	1	U38964	+	+	+	+		+	
potassium inwardly- rectifying channel, subfamily J, member 15 (KCNJ15)	1	D87291			·	+		+	
potassium voltage-gated channel, KQT-like	1	AF051426		+	+	+		+	-0
(KCNQ1) POU domain, class 2,	1	Z49194		<u> </u>		+			
associating factor 1 (POU2AF1) POU domain, class 2,	•							*	
transcription factor 1 (POU2F1)	2	X13403		+		+	,		
PPAR binding protein (PPARBP)	1	Y13467	+	+	+	+		+	
PPAR gamma2	1	D83233	L	ļ		L	L	l	
pre-B-cell colony- enhancing factor (PBEF)	8	U02020							
prefoldin 1 (PFDN1)	1	Y17392	+	+	+	+	+	+	<u> </u>
prefoldin 5 (PRFLD5)	3	D89667	В	+	+		+		
prefoldin subunit 3 (=U96759 von Hippel- Lindau binding protein (VBP-1))	1	Y17394							
pregnancy-associated plasma protein A (PAPPA)	1	U28727		+		+			high in placenta
pre-mRNA splicing factor SF3a (60kD), similar to S. cerevisiae PRP9	1	U08815	+	+	+	+		+	
(spliceosome-associated protein 61) (SF3A60)									
pre-mRNA splicing factor SF3a (60kD), similar to S. cerevisiae PRP9 (spliceosome-associated	•	. U08815							
protein 61) (SF3A60) (low score) pre-mRNA splicing factor	2	D28423		·					·
SRp20, 5'UTR preprotein translocase	3	X97544		-	-	-	<u>.</u>	+	
(TIM17)				Ŀ	<u> </u>			Ĺ	<u> </u>
prion protein	. 1	X82545							
prion protein (p27-30) (Creutzfeld-Jakob disease, Gerstmann-Strauster-	1	M13899.		+	+	+		+	
Scheinker syndrome, fatal familial insomnia) (PRNP) pristanoyl-CoA oxidase		VALLE					ļ. <u>.</u> .		
(low match) pristanoyi-CoA oxidase	1	Y11411			<u> </u>		Ŀ		
(low score) procollagen-lysine, 2-	1	Y11411	·			<u>                                     </u>			
oxoglutarate 5- dioxygenase (lysine hydroxylase, Ehlers-Danlos syndrome type VI) (PLOD)	1	M98252		*	+	+	·.	+	
procollagen-proline, 2- oxoglutarate 4- dioxygenase (proline 4- hydroxylase), alpha polypeptide 1 (P4HA1)	1	M24486	•	*	+	+	+	+	

								·	1/CA00/00003
procollagen-proline, 2- oxoglutarate 4-	4	X05130	. +	+	+	+	+	+	
dioxygenase (proline 4-									
hydroxylase), beta polypeptide (protein									
disulfide isomerase; thyroid						l	٠.		
hormone binding protein p55) (P4HB)	•					i i			
profilin 1 (PFN1)	1	J03191	+	+	+	+	+	+	
progesterone receptor-	2	: U28918	_	+	-		·		
associated p48 protein (P48)				- :					
prohibitin (PHB)		S85655	<del> </del>	. +	+	.+	+	+	
proliferating cell nuclear	3	J04718	+	+	+	+		+	···
antigen (PČNA)	- 100 114		·				ļ.,,		
Igene A (natural iller-	•	219184	1 +	+11	+	+	[° +''	+	
enhancing factor A)									
(PAGA) proline-rich protein BstNI	· 1	S62936					_	_	· · · · · · · · · · · · · · · · · · ·
subfamily 2 (PRB2) (non-									,
exact, 43%aa) proline-serine-threonine	1	U94778							
phosphatase interacting		054778				-			
protein 1 (PSTPIP1) prolyl endopeptidase	2	X74496	·						
(PREP)		A74450		+ "		+		+	·
prolylcarboxypeptidase (angiotensinase C) (PRCP)	5	L13977		+	+	+	+	+	
promyelocytic leukemia	1	M80185	+	+	+	+		+	· · · · · · · · · · · · · · · · · · ·
(PML)	4	VE 7-740							
complement (PFC)	4	X57748	+					. :	
pro-platelet basic protein (includes platelet basic	1	M54995			+	+		+	
protein, beta-			, ,						
thromboglobulin, connective				l				٠.	•
tissue-activating peptide III,		.•							
neutrophil-activating				·					
peptide-2) (PPBP) pro-platelet basic protein	7	M54995	+		+		+		
(includes platelet basic	·								
protein, beta- thromboglobulin,									
connective tissue-		•							
activating peptide III, neutrophil-activating				-					
peptide-2) (PPBP)									
proprotein convertase subtilisin/kexin type 7	. 4	U40623							
(PCSK7)									
prosaposin (variant Gaucher disease and	89	D00422	1+	. +	+	+	+	+	
variant metachromatic	•		. ;					-	
leukodystrophy) (PSAP) prostaglandin-		U63846	В	+			+	+	
endoperoxide synthase 1	' '	333040	'	_			_		
(prostaglandin G/H		-			ł				
cyclooxygenase) (PTGS1)	. 1								
prostaglandin- endoperoxide synthase 2	2	L15326							
(prostaglandin G/H	4								i
synthase and				ł					
cyclooxygenase) (PTGS2) prostaglandin-		D64068				_			
endoperoxide synthase-1	•	201000	.			ĺ			
(=L08404; U84208) (all promoters)			<u> </u>	- 1	l				
prostate carcinoma tumor	2	L78132					-		
antigen (pcta-1)							]	لـــا	

WO 00/4 <b>0749</b>			•					PC	I/CA00/00005
protease inhibitor 1 (anti- elastase), alpha-1-	17	K02212		+	+	+	+	. +	high in many libraries
antitrypsin (PI) protease inhibitor 2 (anti-	1	M93056				+.		+	Y-
monocyte/neutrophil (ELANH2) (low match)									
proteasome (prosome, macropain) 26S subunit, ATPase, 1 (PSMC1)	3	L02426	8	+	+			+	
proteasome (prosome, macropain) 26S subunit,	1 .	М34079	+	+	+	+		+	
ATPase, 3 (PSMC3) proteasome (prosome, macropain) 26S subunit,	2	AF020736	· · · · · · · · · · · · · · · · · · ·						
ATPase, 4 (PSMC4) proteasome (prosome,	5	L38810	+	+	.+	+	+	+	
macropain) 26S subunit, ATPase, 5 (PSMC5) proteasome (prosome,	2	D78275	+	.+	+,	+		+	1.
macropain) 26S subunit, ATPase, 6 (PMSC6)	·	AF001212	. +	+	Ŀ.		+		
proteasome (prosome, macropain) 26S subunit, non-ATPase, 11 (PSMD11)								Ŀ	
proteasome (prosome, macropain) 26S subunit, non-ATPase, 2 (PSMD2)	2	D78151		+	+			+	
proteasome (prosome, macropain) 26S subunit,	1	S79862 .	Т	+	+		+		
non-ATPase, 5 (PSMD5) proteasome (prosome, macropain) 26S subunit,	1	D50063		+	+	+		+	high in many libraries
non-ATPase, 7 (Mov34 homolog) (PMSD7) proteasome (prosome,	-1	AB003103		+	+	+	<u> </u>	+	
macropain) 26S subunit, on-ATPase, 12 (PMSD12)						1		+	
proteasome (prosome, macropain) activator subunit 1 (PA28 alpha) (PSME1)	ن	L07633	*	+				ľ	
proteasome (prosome, macropain) subunit, alpha type, 3 (PSMA3)	2	D00762		+	+	+		+	
proteasome (prosome, macropain) subunit, alpha type, 5 (PSMA5)	3	X61970	+	+	+	+		+	
proteasome (prosome, macropain) subunit, alpha type, 7 (PSMA7)	3	AF054185		+	+	+	+	+	
proteasome (prosome, macropain) subunit, alpha type, 7 (PSMA7) (low match)	1	AF022815							
proteasome (prosome, macropain) subunit, beta type, 1 (PSMB1)	1	D00761	+	+	1	+	†	+	
proteasome (prosome, macropain) subunit, beta type, 10 (PSMB10)	1	X71874	+	+	ŀ	+	+	+	JF.
proteasome (prosome, macropain) subunit, beta type, 6 (PMSB6)	1	D29012		+	+	+			
proteasome (prosome, macropain) subunit, beta type, 8 (large	1	U17497	+	+	+	+		•	
multifunctional protease 7) (PSMB8) proteasome (prosome,	3	Z14977	+	-	1	+	-	+	
macropain) subunit, beta type, 9 (large multifunctional protease 2)					-				
(PSMB9)	1	<u> </u>	70						

D38048	WO 00/40749		•					•	PÇ	71/CA00/00005
protein protein for beta- galactosidadesis (PPGB) protein A liferatively spliced form 2 (A-2) protein A liferatively spliced form 2 (A-2) protein A liferatively spliced form 2 (A-2) protein Activator of the interferon-induced protein kinase (PACT) protein disulfide isomerase- related protein (P5) protein geranylgeranyltransferase type 1 beta subunit (P12,3) protein Geranyltransferase type 1 beta subunit (P12,3) protein Geranyltransferase type 1 beta subunit (P12,3) protein (P12,3) protein (P12,3) protein kinase A anchoring protein kinase A anchoring protein kinase C substrate 80K-H (PRKCSH) protein kinase C, beta 1 (PRKCB1) protein kinase C, beta 1 (PRKCB1) protein kinase C, beta 1 (PRKCB1) protein kinase C, delta 1 (PRKCB1) protein kinase C, delta 1 (PRKCB1) protein kinase C, delta 1 (PRKCB1) protein kinase C, delta 1 (PRKCB1) protein kinase C, delta 1 (PRKCB1) protein kinase C, delta 1 (PRKCB1) protein kinase C, delta 1 (PRKCB1) protein kinase C, delta 1 (PRKCB1) protein kinase C, delta 1 (PRKCB1) protein kinase C, delta 1 (PRKCB1) protein kinase C, delta 1 (PRKCB1) protein kinase C, delta 1 (PRKCB1) protein kinase C, delta 2 (PRKCB1) protein kinase C, delta 3 (PRKCB1) protein kinase C, delta 4 (PRKCB1) protein kinase C, delta 5 (PRKCB1) protein kinase C, delta 6 (PRKCB1) protein kinase, delta 7 (	macropain) subunit, beta	1	D38048	+	+	+ .	+	+	+	+),+
protein A alternatively spliced form 2 (A-2) protein activator of the interferon-induced protein kinase (PACT) protein activator of the interferon-induced protein kinase (PACT) protein distribution in the interferon-induced protein (PS) protein geranylgeranyltransferase two et l, beta subunit (P-GGT18) protein geranylgeranyltransferase two et l, beta subunit (P-GGT18) protein from protein from from from from from from from from	protective protein for beta- galactosidase	3	M22960	+	+	+	+	+	+	·
protein activator of the interferon-induced protein kinase (PACT) interferon-induced protein kinase (PACT) interferon-induced protein kinase (PACT) interferon-induced protein kinase (PACT) interferon-induced protein kinase (PACT) interferon-induced protein kinase (PACT) interferon-induced protein (PS) interferon-induced protein (PS) interferon-induced protein (PS) interferon-induced protein (PS) interferon-induced protein kinase (PACT) interferon-induced interferon-ind	protein A alternatively	1	U47925		. +		-	<u> </u>		
protein disulfide isomerase- related protein (P5) protein geranylgranyftransferase type I, beta subunit (PGGT18) protein homologous to chicken B complex protein, guanine nucleotide binding (H12.3) protein kinase A anchoring protein kinase C substrate 80K-H (PRKCSH) protein kinase C, beta 1 (PRKCSH) protein kinase C, beta 1 (PRKCH) protein kinase C, detta (PRKCH) protein kinase C, detta (PRKCH) protein kinase C, detta (PRKCH) protein kinase C, detta (PRKCH) protein kinase C, detta (PRKCH) protein kinase C, detta (PRKCH) protein kinase C, detta (PRKCH) protein kinase C, mu (PRKCM) (non-exact 78%) protein kinase, cital 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	protein activator of the interferon-induced protein	1	AF072860		+	+ .	+		+	high in testis
geranylgeranyltransferase weel, beta subunit (F-GGT18) protein homologous to chicken 8 complex protein, guarnine nucleotide binding (H12.3) protein kinase A anchoring protein protein kinase C substrate 8 cs. H (PRKCSH) protein kinase C, beta 1 (PRKCSH) protein kinase C, beta 1 (PRKCSH) protein kinase C, detta (PRKCSH) protein kinase C, detta (PRKCSH) protein kinase C, detta (PRKCSH) protein kinase C, detta (PRKCSH) protein kinase C, teta (PRKCSH) protein kinase C, teta (PRKCSH) protein kinase C, teta (PRKCSH) protein kinase C, teta (PRKCM) protein kinase C, tike 1 (PRKCSH) protein kinase C, tike 1 (PRKCSH) protein kinase C, tike 1 (PRKCSH) protein kinase C, tike 1 (PRKCSH) protein kinase C, tike 1 (PRKCSH) protein kinase C, tike 1 (PRKCSH) protein kinase, cAMP-activated, gamma 1 non-catalytic subunit (PRKAR1A) protein kinase, cAMP-dependent, regulatory, type I, alpha (tissue specific extinguisher 1) (PRKAR1A) protein kinase, cAMP-dependent, regulatory, type I, alpha (tissue specific extinguisher 1) (PRKAR1A) protein kinase, DNA-activated, catalytic polypeptide (PRKDC) protein kinase, DNA-activated (catalytic polypeptide (PRKDC) protein kinase, bit catalytic subunit (PRKM1) protein kinase, bit catalytic subunit, alpha isoform (PPP1CA) protein kinase 3 (MAP kinase 3 (MAP kinase 3 (MAP kinase 3 (MAP kinase 3 (MAP kinase 3 (MAP kinase 3 (MAP kinase 3 (MAP kinase 3 (MAP kinase 3 (MAP kinase 4 (MAP kinase 3 (MAP kinase 3 (MAP kinase 4 (MAP kinase 3 (MAP kinase 4 (MAP kinase 4 (MAP kinase 5 (MAP kinase 5 (MAP kinase 5 (MAP kinase 6 (MAP kinase 6 (MAP kinase 6 (MAP kinase 6 (MAP kinase 6 (MAP kinase 6 (MAP kinase 7 (MAP kinase 8 (MAP kinase 8 (MAP kinase 8 (MAP kinase 8 (MAP kinase 8 (MAP kinase 8 (MAP kinase 8 (MAP kinase 8 (MAP kinase 8 (MAP	protein disulfide isomerase-	2	D49489	+	+	+	+	+	+	-
Decim   Normologous to   Chicken   Scomplex protein, guanine nucleotide binding   Chicken   Scomplex protein, guanine nucleotide binding   Chicken   Scomplex protein   Chicken   Scomplex protein   Chicken   Scomplex   Chicken   Chicke	geranylgeranyltransferase	1	L25441	+	+	+				
chicken 8 complex protein, guanine nucleotide binding (H12.3) protein kinase A anchoring protein kinase C substrate 2 U50317 + + + + + + + + + + + + + + + + + + +	protein homologous to	20	M24194	+	+	+	+	+	+	high in many libraries
protein kinase C substrate 2 U50317 + + + + + + + + + + + + + + + + + + +	chicken B complex protein, guanine nucleotide binding (H12.3)	. ,	MEYIOV							ingi ii many iibianse
80K-H (PRKCSH) protein kinase C, beta 1 (PRKCB1) protein kinase C, detta (PRKCB1) protein kinase C, detta (PRKCH) protein kinase C, eta (PRKCH) protein kinase C, eta (PRKCM) (PRKCM) protein kinase C, mu (PRKCM) (PRKCH) protein kinase C, mu (PRKCM) (PRKCH) protein kinase C, mu (PRKCH) protein kinase C, mu (PRKCH) protein kinase C, mu (PRKCH) protein kinase C, MP - dependent, regulatory dependent, regulatory, type t, alpha (tissue specific extinguisher 1) (PRKAR1A) protein kinase, DNA- activated, catalytic polypeptide (PRKDC) protein kinase, mitogen- activated 1 (MAP kinase 1; p40, p41) (PRKM1) protein kinase, mitogen- activated 6 (extracellular signal-regulated kinase, p97) (PRKM6) protein kinase, mitogen- activated 6 (extracellular signal-regulated kinase, p97) (PRKM6) protein kinase, mitogen- activated 6 (extracellular signal-regulated kinase) p97) (PRKM6) protein kinase, mitogen- activated 6 (extracellular signal-regulated kinase) p97) (PRKM6) protein kinase, mitogen- activated, kinase 3 (MAP kinase kinase 3) (MAP kinase kinase 4) (MAP kinase kinase 4) (MAP kinase kinase 4) (MAP ki	protein									
(PRKCB1)	80K-H (PRKCSH)				. •					
(PRKCD)	(PRKCB1)									
(PRKCH) prolein kinase C, mu (PRKCM) (non-exact 78%) Protein kinase C-like 1 (PRKCL1) Protein kinase, AMP- activated, gamma 1 non- catalytic subunit (PRKAG1) protein kinase, cAMP- dependent, regulatory, type l, alpha (tissue specific extinguisher 1) (PRKAR1A) protein kinase, DNA- activated, catalytic polypeptide (PRKDC) protein kinase, mitogen- activated 1 (MAP kinase 1; p40, p41) (PRKM1) protein kinase, mitogen- activated 6 (extracellular signal-regulated kinase, p97) (PRKM6) protein kinase 3 (MAP kinase kinase 3) (PRKMK3) protein phosphatase 1, catalytic subunit, alpha isoform (PPP1CA) protein phosphatase 1, regulatory subunit 10 (PPPR10) protein phosphatase 1, regulatory subunit 10 (PPPR10) protein phosphatase 1, regulatory subunit 7	(PRKCD)		•	+	+		<u> </u>		<u> </u>	<u> </u>
PRKCM  (non-exact 78%)   Protein kinase C-like 1   Protein kinase C-like 1   Protein kinase C-like 1   Protein kinase, AMP- activated, gamma 1 non-catalytic subunit (PRKAG1)   Protein kinase, cAMP- dependent, regulatory, type   alpha (tissue specific extinguisher 1) (PRKAR1A)   Protein kinase, DNA- activated, catalytic polypspitide (PRKDC)   Protein kinase, mitogenactivated 1 (MAP kinase 1; p40, p41) (PRKM1)   Protein kinase, mitogenactivated 6 (extracellular signal-regulated kinase, p97) (PRKM6)   Protein kinase, mitogenactivated 6 (extracellular signal-regulated kinase, p97) (PRKM6)   Protein kinase, mitogenactivated, kinase 3 (MAP kinase 3 (MAP kinase 3) (PRKMS3)   Protein phosphatase 1, catalytic subunit, alpha isoform (PPP1CA)   Protein phosphatase 1, catalytic subunit, alpha isoform (PPP1CA)   Protein phosphatase 1, catalytic subunit 10 (PPPR10)   Protein phosphatase 1, catalytic subunit 10 (PPPR10)   Protein phosphatase 1, catalytic subunit 7	(PRKCH)				Ŀ				+	· .
(PRKCL1) protein kinase, AMP- activated, gamma 1 non- catalytic subunit (PRKAG1) protein kinase, CAMP- dependent, regulatory, type l, alpha (tissue specific extinguisher 1) (PRKAR1A) protein kinase, DNA- activated, catalytic polypeptide (PRKDC) protein kinase, mitogen- activated 1 (MAP kinase 1; p40, p41) (PRKM1) protein kinase, mitogen- activated 6 (extracellular signal-regulated kinase, p97) (PRKM6) protein kinase, mitogen- activated, kinase 3 (MAP kinase 3) (PRKMK3) protein phosphatase 1, catalytic subunit, alpha isoform (PPP1CA) protein phosphatase 1, regulatory subunit 10 (PPPR10) protein phosphatase 1, regulatory subunit 7	(PRKCM) (non-exact 78%)	•								
activated, gamma 1 non- catalytic subunit (PRKAG1) protein kinase, cAMP- dependent, regulatory, type I, alpha (tissue specific extinguisher 1) (PRKAR1A) protein kinase, DNA- activated, catalytic polypeptide (PRKDC) protein kinase, mitogen- activated 1 (MAP kinase 1; p40, p41) (PRKM1) protein kinase, mitogen- activated 6 (extracellular signal-regulated kinase, p97) (PRKM6) protein kinase 3 (MAP kinase kinase 3) (PRKMK3) protein phosphatase 1, catalytic subunit, alpha isoform (PPPTCA) protein phosphatase 1, regulatory subunit 10 (PPPR10) protein phosphatase 1, regulatory subunit 7	(PRKCL1)						+		+	
protein kinase, cAMP- dependent, regulatory, type I, alpha (tissue specific extinguisher 1) (PRKAR1A) protein kinase, DNA- activated, catalytic polypeptide (PRKDC) protein kinase, mitogen- activated 1 (MAP kinase 1; p40, p41) (PRKM1) protein kinase, mitogen- activated 6 (extracellular signal-regulated kinase, p97) (PRKM6) protein kinase 3) (MAP kinase 3) (MAP kinase kinase 3) (PRKM63) protein phosphatase 1, catalytic subunit, alpha isoform (PPP1CA) protein phosphatase 1, regulatory subunit 10 (PPPR10) protein phosphatase 1, regulatory subunit 7	activated, gamma 1 non- catalytic subunit (PRKAG1)	<b>1</b>	U42412		*	*				
protein kinase, DNA- activated, catalytic polypeptide (PRKDC) protein kinase, mitogen- activated 1 (MAP kinase 1; p40, p41) (PRKM1)  protein kinase, mitogen- activated 6 (extracellular signal-regulated kinase, p97) (PRKM6)  protein kinase, mitogen- activated, kinase 3 (MAP kinase kinase 3) ((PRKMK3) protein phosphatase 1, catalytic subunit, alpha isoform (PPP1CA)  protein phosphatase 1, regulatory subunit 10 ((PPR10) protein phosphatase 1, regulatory subunit 7	protein kinase, cAMP- dependent, regulatory, type I, alpha (tissue specific	4	M18468		+	+	+	+	+	
activated 1 (MAP kinase 1; p40, p41) (PRKM1) protein kinase, mitogenactivated 6 (extracellular signal-regulated kinase, p97) (PRKM6) protein kinase, mitogenactivated, kinase 3 (MAP kinase kinase 3) (PRKMK3) protein phosphatase 1, catalytic subunit, alpha isoform (PPP1CA) protein phosphatase 1, regulatory subunit 10 (PPR10) protein phosphatase 1, 2 Z50749 + + + + + + + + + + + + + + + + + + +	protein kinase, DNA- activated, catalytic	1	U47077		+	+		+	+	
protein kinase, mitogen- activated 6 (extracellular signal-regulated kinase, p97) (PRKM6) protein kinase, mitogen- activated, kinase 3 (MAP kinase kinase 3) (PRKMK3) (PRKMK3) protein phosphatase 1, 5 M63960 + + + + + + + + + + + + + + + + + + +	activated 1 (MAP kinase 1; p40, p41) (PRKM1)	1	Z11695	В	+			+		
protein kinase, mitogen- activated, kinase 3 (MAP kinase kinase 3) (PRKMK3) protein phosphatase 1, catalytic subunit, alpha isoform (PPP1CA) protein phosphatase 1, regulatory subunit 10 (PPPR10) protein phosphatase 1, regulatory subunit 7	protein kinase, mitogen- activated 6 (extracellular signal-regulated kinase	1	L77964		+		+	+	+	Υ.
catalytic subunit, alpha isoform (PPP1CA) protein phosphatase 1, regulatory subunit 10 (PPPR10) protein phosphatase 1, 2 Z50749 + + + + + + + + + + + + + + + + + + +	protein kinase, mitogen- activated, kinase 3 (MAP kinase kinase 3)		U66839	+	+	+	+	+		
protein phosphatase 1, 3 Y13247 + + + + + + regulatory subunit 10 (PPPR10) protein phosphatase 1, 2 Z50749 + + + + + + + regulatory subunit 7	catalytic subunit, alpha	5	M63960	+	+	+	+	+	+	
regulatory subunit 7	protein phosphatase 1, regulatory subunit 10 (PPPR10)	3			+	+	+		+	
	regulatory subunit 7 (PPP1R7)	2		+	+	+		+	+	
protein phosphatase 2 1 X12656 + + + + + + + + + + + + + + + + + +	(formerly 2A), catalytic subunit, beta isoform (PPP2CB)	1		+	+	+		+		ı
protein phosphatase 2 (formerly 2A), regulatory subunit B" (PR 72), alpha isoform and (PR 130), beta isoform (PPP2R3)	(formerly 2A), regulatory subunit B" (PR 72), alpha isoform and (PR 130), beta		·			+	+		+	

protein phosphatase 2, regulatory subunit B (B56), alpha isoform (PPP2R5A)	2	L42373	. +	+	+	+		+	
protein phosphatase 2, regulatory subunit B (B56), delta isoform (PPP2R5D)	3	D78360		+	+	+		+	
protein phosphatase 2, regulatory subunit B (B56), gamma isoform (PPP2R5C)	1	D26445	+	+	+	+		+	
protein phosphatase 2A regulatory subunit alpha- isotype (alpha-PR65)	5	J02902	+	+	+	+		+	
protein phosphatase 4 (formerly X), catalytic subunit (PPP4C)	2	AF097996		+	+	+	-	+	
protein tyrosine kinase 2 beta (PTK2B)	1 . 4	L49207		+	•	+		+	
protein tyrosine phosphatase epsilon		X54134							
protein tyrosine phosphatase type IVA, member 2 (PTP4A2)	2	L48723	+	+	+	+	,	+	* -
protein tyrosine phosphatase, non-receptor type 1 (PTPN1)	1	M31724	+	+	+	+		·	
protein tyrosine phosphatase, non-receptor type 12 (PTPN12)	1	M93425		+	+	+		+	high in testis
protein tyrosine phosphatase, non-receptor type 12 (PTPN12) (non- exact, 70%)	1	M93425			P			3	
protein tyrosine phosphatase, non-receptor type 2 (PTPN2)	2	M25393		+	+	+.		+	,
protein tyrosine phosphatase, non-receptor type 4 (megakaryocyte) (PTPN4)	1	M68941			+	+		+	
protein tyrosine phosphatase, non-receptor type 6 (PTPN6)	7	M74903	•	+	+	+		+	
protein tyrosine phosphatase, non-receptor type 7 (PTPN7)	1	D11327	+			+	,	+	0
protein tyrosine phosphatase, receptor type, alpha polypeptide (PTPRA)	1	M34668	+	+	+	+		+	
protein tyrosine phosphatase, receptor type, c polypeptide (PTPRC)	44	Y00638	+	+		+		+	
protein tyrosine phosphatase, receptor type, M (PTPRM)	1.	X58288		+	+	+		+	
protein tyrosine phosphatase, receptor type, N polypeptide 2 (PTPRN2)	2	U81561		+		+	,	+	
protein with polyglutamine repeat (ERPROT213-21)	1	U94836	+	+	+	+		+	
protein-kinase, interferon- inducible double stranded RNA dependent inhibitor (PRKRI)	1	U28424		+	+	+	<b>*</b> · .	+	
protein-L-isoaspartate (D-aspartate) O-methyltransferase (PCMT1)	4	D13892		+	+				
proteoglycan 1, secretory granule (PRG1)	7	J03223		+	·	+		+	
prothymosin, alpha (gene sequence 28) (PTMA)	12	M14483	+	+	+	+	+	+	
		-							<u> </u>

		•							
prp28, U5 snRNP 100 kd protein (U5-100K)	7	AF026402	+	+	+	+		+	
PRP4/STK/WD splicing factor (HPRP4P)	1	AF001687		+	+.	+		+	<del></del>
PTK7 protein tyrosine kinase 7 (PTK7)	1	U40271		+	+	+		+	
purinergic receptor P2X, ligand-gated ion channel, 4 (P2RX4)	3	AF000234		. +	+	+		+	
purinergic receptor P2X, ligand-gated ion channel, 7 (P2RX7)	1	Y12851	+			-	-	·	macrophage only
puromycin-sensitive aminopeptidase (PSA)	1	Y07701	<u> </u>	+	+			+	
putative ATP(GTP)-binding	2	AJ010842		+		-		+	
putative brain nuclearly- targeted protein (KIAA0765)	1	AB018308	+	+	+	+		+	
putative chemokine receptor; GTP-binding	1	D10923	+			<u> </u>		-	
protein (HM74) putative dienoyl-CoA	1	AF030249			<u> </u>		<u> </u>	_	
isomerase (ECH1) putative G-binding protein	1	AF065393	<u> </u>	-		-	<del>                                     </del>	-	
Putative human HLA class II associated protein I (PHAP1)	.1	U73477	В	+			+	- ) -	
Putative L-type neutral amino acid transporter (KIAA0436)	1.	AB007896							
putative mitochondrial space protein 32.1	1	AF050198				-	-	-	
PUTATIVE MUCIN CORE PROTEIN PRECURSOR	1	Q04900	<del></del>					_	
24 (MULTI-  GLYCOSYLATED CORE  PROTEIN 24) (MGC-24)  (MUC-24)	÷								
putative nucleic acid binding protein	2 .	X76302	+	+	+	+	_	+	
putative outer mitochondrial membrane 34 kDa translocase Htom34	1	U58970		+	+	+		+	
putative p150 (non-exact 88%)	1	U93568				1			
putative translation initiation factor (SUI1)	1	L26247	+	+	+	+	+	+	High in moderately differentiated colon adenocarcinoma
putative tumor suppressor protein (123F2)	1	AF061836		+	.+	+		+	aderiocardiforna
pyrroline 5-carboxylate reductase	1	M77836	+	+	+	+		+	
pyruvate dehydrogenase (lipoamide) alpha 1 (PDHA1)	1	D90084		+	+	+	+	+	
pyruvate dehydrogenase (lipoamide) beta (PDHB)	2	J03576	+	+	+	+		+	
Pyruvate dehydrogenase complex, lipoyl-containing component X; E3-binding protein (PDX1)	3	Y13145		+	+				
pyruvate kinase, muscle (PKM2)	11	M23725					+		
RAB, member of RAS oncogene family-like (RABL)	1	U18420		+	+	+		+	
RAB1, member RAS oncogene family (RAB1)	3	M28209		+	+	+		+	
RAB11A, member RAS oncogene family (RAB11A)	2	X56740	+	+	+	+		+	high in spleen

	_								
RAB11B, member RAS oncogene family (Rab11B)	1	D45418		1+		·		+	<u> </u>
RAB27A, member RAS	3	U38654	<del> </del>	┼	<u> </u>	+		<del> </del>	
oncogene family (RAB27A)		00000				Ι΄.		'	
RAB5B, member RAS oncogene family (RAB5B)	1	X54871		+	+	+	$\vdash$	+	
RAB6, member RAS	1	M28212	-	++		<b>!</b>	-	·+	<u> </u>
oncogene family (RAB6)			İ	"		ł		"	
RAB7, member RAS oncogene family (RAB7)	1	X93499	+	+	+	+		+	
RAB7, member RAS	2	D84488	<del>                                      </del>	+	+	+		+	· · · · · · · · · · · · · · · · · · ·
oncogene family-like 1	<b>-</b> .	004-00	<b> </b>		*	•	1	*	
(RAB7L1) RAB9, member RAS		1122400		<u> </u>		L		Ŀ	<u> </u>
oncogene family (RAB9)	1	U44103	1				i		
RAD50 (S. cerevisiae)	i.2.	U63139		+	+	+	<del>                                     </del>	-	
homolog (RAD50) RAD51 (S. cerevisiae)		A F (ab) old old o	ļ			Ľ_	L.,	<u> </u>	
homolog C (RAD51C)	,	AF029669	· ,	+	+	+	1	+	
Radin blood group (RD)	. 2	L03411	<del>                                     </del>	+	+	+	_	+	
RAE1 (RNA export 1,	3	U84720	+	+	+	+		+	<del> </del>
S.pombe) homolog (RAE1)		10510							
(RLIP76)	2	L42542	+	+	+	+			
RAN binding protein 2-like	2	AF012086	<del> </del>		٠	-		├─	
1 (RANBP2L1) Ran GTPase activating		V00000							
protein 1 (RANGAP1)	3	X82260	+	+	+	+		+	
RAN, member RAS	1	M31469	<del> </del>			<del>                                     </del>		-	
oncogene family (RAN) (low match)	. •		_				ĺ	1	'
RanBP2 (Ran-binding	1	D42063	<u> </u>	-		<b> </b> -	<u> </u>	ļ.,	
protein 2) (=U19248;	.41	342000				<b>.</b> .		1	
L41840 sapiens nucleoporin (NUP358))		·							
ransforming growth factor,	4	D50683	+	+	+	+	<u> </u>	+	
beta receptor II (70-80kD)  (TGFBR2)				ľ	·			•	
RAP1A, member of RAS oncogene family (RAP1A)	. 10	M22995	+ .	+	+ '	+	+	+	
RAR-related orphan receptor C (RORC)	1	U16997					·	+	
RAS guanyl releasing	1	Y12336	7 +	+			$\vdash$	-	
protein 2 (calcium and DAG-regulated)				·					. :
ras homolog gene family,	12	X05026	<del>                                     </del>	+	+	+	+	+	high in ovary
member A (ARHA)		7,00020						•	Ingil in Ovary
ras homolog gene family, member G (rho G) (ARHG)	1	X61587	. +	1+	+	+			
ras homolog gene family,	2	Z35227	+	+-	+			+	
member H (ARHH)									
ras inhibitor (RIN1)	2	M37191		+					
Ras-GTPase activating protein SH3 domain-	2	AF053535	· + -	+	+	+		+	
binding protein 2									
(KIAA0660) Ras-GTPase-activating		Ligaria				911			
protein SH3-domain-	3	U32519	+	+	+	+		+	
binding protein (G3BP)					. •				·
ras-related C3 botulinum toxin substrate 2 (rho	11	M29871			+			+	
family, small GTP binding		•							. [
protein Rac2) (RAC2)				<u> </u>					
RAS-RELATED PROTEIN RAP-1B (GTP-BINDING	1	P09526					·		·
PROTEIN SMG P21B)		• –			ļ	ı			
RBQ-1	1	X85133		+	+	+			
rearranged T cell receptor	1	L06891							
beta variable region (TCRB) (=X58810)									
regulator of Fas-induced apoptosis (TOSO)	1	AF057557	В				+		
			<u> </u>						<u> </u>

signaling 6 (RGS6)   regulator of C-protein   2	WO 00/40749								FC	.1/CA00/00005
regulator of C-protein signaling 14 (ROS14)	regulator of G protein	1	AF073920	<del></del>	+					
regulator of C-protein signalling 2, 24ch (RGS2) signalling 2, 24ch (RGS2) signalling 2, 24ch (RGS2) signalling 3, 64ch (RGS2) signalling 3, 64ch (RGS2) signalling 5, 64ch (RGS2) signalling 5, 64ch (RGS2) signalling 6, 64ch (R	regulator of G-protein	2	AF037195	+	+	+	+			
regulatory factor X, 4 aa) regulatory factor X, 4 regulatory factor X, 4 regulatory factor X, 4 regulatory factor X, 4 regulatory factor X, 5 response zinc finger gene regulatory factor X, 5 response zinc finger gene regulatory factor X, 5 response zinc finger gene regulatory factor X, 5 response zinc finger gene regulatory factor X, 5 response zinc finger gene regulatory factor X, 5 response zinc finger gene regulatory factor X, 5 response zinc finger gene regulatory factor X, 5 response zinc finger gene regulatory factor X, 5 response zinc finger gene regulatory factor X, 5 response zinc finger gene regulatory factor X, 5 response zinc finger gene regulatory factor X, 5 response zinc finger gene regulator X, 5 response zinc finger gene regulator X, 5 response zinc finger gene regulator X, 5 response zinc finger gene regulator X, 5 response zinc finger gene regulator X, 5 re	regulator of G-protein	6	L13391	+	+	+	+		+	
aa) regulatory factor X, 4 (influences HLA class II expression (RFX4) regulatory factor X, 5 (influences HLA class II expression (RFX5) regulatory factor X, 5 (influences HLA class II expression (RFX5) regulatory factor X, 5 (influences HLA class II expression (RFX5) regulatory factor X, 5 (influences HLA class II expression (RFX5) regulatory factor X, 5 (influences HLA class II expression (RFX5) regulatory factor X, 5 (influences HLA class II expression (RFX5) regulatory factor X, 5 (influences HLA class II expression (RFX5) regulatory factor X, 5 (influences HLA class II expression (RFX5) regulatory factor X, 5 (influences HLA class II expression (RFX5) regulatory factor X, 5 (influences HLA class II expression (RFX5) regulatory factor X, 5 (influences HLA class II expression (RFX5) regulatory factor X, 5 (influences HLA class II expression (RFX5) regulatory factor X, 5 (influences HLA class II expression (RFX5) regulatory factor X, 5 (influences HLA class II expression (RFX5) regulatory factor X, 5 (influences HLA class II expression (RFX5) regulatory factor X, 5 (influences HLA class II expression (RFX5) regulatory factor X, 5 (influences HLA class II expression (RFX5) regulatory factor X, 5 (influences HLA class II expression (RFX5) regulatory factor X, 5 (influences HLA class II expression (RFX5) regulatory factor X, 5 (influences HLA class II expression (RFX5) regulatory factor X, 5 (influences HLA class II expression (RFX5) regulatory factor X, 5 (influences HLA class II expression (RFX5) regulatory factor X, 5 (influences HLA class II expression (RFX5) regulatory factor X, 5 (influences HLA class II expression (RFX5) regulatory factor X, 5 (influences HLA class II expression (RFX5) regulatory factor X, 5 (influences HLA clastor II expression (RFX5) regulatory factor X, 5 (influences HLA clastor II expression (RFX6) regulator factor X, 5 (influences HLA clastor II expression (RFX6) regulator factor X, 5 (influences HLA clastor II expression (RFX6) regulator factor X, 5 (influences HLA clastor II express	regulator of G-protein	1	O15539							
(influences HLA class II expression (RFX4) regulatory factor X, 5 (influences HLA class II expression (RFX5) regulatory factor X, 5 (influences HLA class II expression (RFX5) regulatory factor X, 5 (influences HLA class II expression (RFX5) regulatory factor X, 5 (influences HLA class II expression (RFX5) regulatory factor X, 6 (RPA1) regilication protein A3 (14kD) (RPA3) (low match) requirem, apoptosis requirem, apoptosis response zinc finger gene (REQ) requirem, apoptosis gene (REQ) regulatory factor (REQ) regulator (REQ) regu	signalling 5 (RGS5) (49%									
expression (RFX4) regulatory factor X, 5 (influences HLA class II expression (RFX5) replication protein-A1 (RPA1) replication protein-A1 (RPA1) reproduction 8 (D85228Bc) reprossion (RPA3) regulation protein-A1 (RPA1) reproduction 8 (D85228Bc) reprosse zinc finger gene (REC) requem, apoptosis response zinc finger gene (REC) requem, apoptosis response zinc finger gene (REC) requem, apoptosis response zinc finger gene (REC) requem, apoptosis response zinc finger gene (REC) requem, apoptosis response zinc finger gene (REC) requem, apoptosis response zinc finger gene (REC) requem, apoptosis response zinc finger gene (REC) requem, apoptosis response zinc finger gene (REC) requem, apoptosis response zinc finger gene (REC) requem, apoptosis response zinc finger gene (REC) requem, apoptosis response zinc finger gene (REC) requem, apoptosis response zinc finger gene (REC) requem, apoptosis response zinc finger gene (REC) requem, apoptosis response zinc finger gene (REC) requem, apoptosis response zinc finger gene (REC) requem, apoptosis response zinc finger gene (REC) requem, apoptosis response zinc finger gene response zinc finger response zinc finger response zinc finger response zinc finger response zinc finger response zinc finger response zinc finger response zinc finger response zinc finger response zinc finger response zinc finger response zinc finger response zinc finger response zinc finger response zinc finger response zinc	regulatory factor X, 4	1	M69297			+	+			
(influencés HLA class II expression (RKX5)	expression) (RFX4)		V85786	<del></del>						
Image: Comparison of the com	(influences HLA class II	٠ .		•		1				•
Comparison   Com	F≘plication protein Λ1	1	M63458	<del></del>	12:	+ 1	+ )		· . <del></del> - ,	3
reproduction 8 (D8S228E) 1 D83/67 + + + + +   Frequent apoptosis   2 U94585 + + + + + +   Frequent apoptosis   1 U94585 + + + + + + +   Frequent apoptosis   1 U94585 + + + + + + +   Frequent apoptosis   1 U94585   1 U945	replication protein A3	1	L07493							
response zinc finger gene (REQ) (=AF001433) (low match) restin (Reed-Steinberg cell-expressed intermediate filament-associated protein) (RSN) retinoblastoma 1 (including osteosarcoma) (RBI) retinoblastoma binding protein (RBBP2H1) retinoblastoma-binding protein (RBBP2H) retinoblastoma-binding protein (RBBP2H) retinoblastoma-binding protein (RBBP2H) retinoblastoma-binding protein (RBBP2H) retinoblastoma-binding protein (RBBP3) retinoblastoma-binding protein (RBBP4) retinoblastoma-bi	reproduction 8 (D8S2298E)	•								
response zinc finger gene (REQ) (=AF001433) (low match) restin (Red-Stemberg cell-strike) (REQ) (=AF001433) (low match) restin (Red-Stemberg cell-strike) (REQ) (=AF0818) (retinoblastoma in (including osteosarcoma) (RB1) retinoblastoma binding protein (ARBP) retinoblastoma-binding protein (RBBP4) retinoblastoma-binding protein (RBBP4) retinoblastoma-binding protein (RBBP4) retinoblastoma-binding protein (RBBP4) retinoblastoma-binding protein (RBBP4) retinoblastoma-binding protein (RBBP4) retinoblastoma-binding protein 4 (RBBP4) retinoblastoma-binding protein 8 (RBBP4) retinoblastoma-binding protein 8 (RBBP4) retinoblastoma-binding protein 8 (RBB	response zinc finger gene (REQ)	2		+ .	+	.+	+		,+	
(REQ) (=AF001433) (low match) restin (Read-Steinberg cell- expressed intermediate filament-associated protein) (RSN) retinoblastoma 1 (including osteosarcoma) (RSN) retinoblastoma binding protein 2 homolog 1 (RBP2H) retinoblastoma-binding protein 2 homolog 1 retinoblastoma-binding protein (RBBP1) retinoblastoma-binding 5 S66427 + + + + + + + + + + + + + + + + + + +	response zinc finger gene	1	U94585							
restin (Reed-Steinberg cell-expressed intermediate filament-associated protein) (RSN) retinoblastoma 1 (including osteosarcoma) (RB1) retinoblastoma 1 (including osteosarcoma) (RB1) retinoblastoma binding protein 2 homolog 1 (RBBP41) retinoblastoma-binding protein 2 homolog 1 (RBBP41) retinoblastoma-binding protein 4 (RBBP4) retinoblastoma-binding 1 X71810 + + + + + + + + + + + + + + + + + + +	(REQ) (=AF001433) (low						ŀ			
filament-associated protein) (RSN) retinoblastoma 1 (including osteosarcoma) (RB1) retinoblastoma 1 (including osteosarcoma) (RB1) retinoblastoma binding protein 2 homolog 1 (RBBP411) retinoblastoma-binding 1 S66427 + + + protein 1 (RBBP1) retinoblastoma-binding 5 S66431 + + + + + + protein 2 (RBP2) retinoblastoma-binding 1 X71810 + + + + + protein 4 (RBBP4) retinoblastoma-binding 1 X74262 + + + + + + protein 4 (RBBP4) retinoblastoma-binding 1 U35143 protein 7 (RBBP7) retinoblastoma-binding 1 U35143 protein 7 (RBBP7) retinoblastoma-binding 1 U35143 protein 7 (RBBP7) retinoblastoma-binding 1 U35143 retinoblastoma-binding 1 U35144 retinoblastoma-binding 1 U35144 retinoblastoma-binding 1 U35144 retinoblastoma-binding 1 U35144 r	restin (Reed-Steinberg cell-	1	M97501	B, T	+	+				
retinoblastoma 1 (including osteosarcoma) (RB1) retinoblastoma binding protein 2 homolog 1 (RBBPH1) retinoblastoma-binding protein 2 homolog 1 (RBBPH1) retinoblastoma-binding protein 2 (RBBP4) retinoblastoma-binding protein 4 (RBBP4) retinoblastoma-binding protein 4 (RBBP4) retinoblastoma-binding protein 4 (RBBP4) retinoblastoma-binding 1 X74262 + + + + + + + + + + + + + + + + + +	filament-associated									
retinoblastoma binding protein 2 homolog 1 (RBBP2H1) retinoblastoma-binding rotein 2 homolog 1 (RBBP2H) retinoblastoma-binding protein 1 (RBBP1) retinoblastoma-binding protein 4 (RBBP2) retinoblastoma-binding protein 4 (RBBP4) retinoblastoma-binding protein 4 (RBBP4) retinoblastoma-binding protein 4 (RBBP4) retinoblastoma-binding protein 7 (RBBP7) retinoblastoma-binding protein 7 (RBBP7) retinoblastoma-binding protein 7 (RBBP7) retinoblastoma-binding protein 7 (RBBP7) retinoblastoma-binding protein 7 (RBBP7) retinoblastoma-binding protein 7 (RBBP7) retinoblastoma-binding protein 7 (RBBP7) retinoblastoma-binding protein 7 (RBBP7) retinoblastoma-binding protein 7 (RBBP7) retinoblastoma-binding protein 7 (RBBP7) retinoblastoma-binding protein 6 (RBRRES3) retinoblastor 6 (RBRRES3) retinoblastor 6 (RBRRES3) retinoblastor 6 (RBRRES3) retinoblastor 6 (RBRRES3) retinoblastor 6 (RBRRES3) retinoblastor 6 (RBRRES3) retinoblastor 6 (RBRRES3) retinoblastor 6 (RBRRES3) retinoblastor 6 (RBRRES3) retinoblastor 6 (RBRRES3) retinoblastor 6 (RBRRES3) retinoblastor 6 (RBRRES3) retinoblastor 6 (RBRRES3) retinoblastor 6 (RBRRES3) retinoblastor 6 (RBRRES3) retinoblastor 6 (RBRRES3) retinoblastor 6 (RBRRES3) retinoblastor 6 (RBRES3) retinoblastor 6 (	retinoblastoma 1 (including	3	L11910	.+	+	+	+			7
retinoblastoma-binding protein 1 (RBBP1)	retinoblastoma binding protein 2 homolog 1	1 .	AF087481							
retinoblastoma-binding protein 2 (RBBP2)	retinoblastoma-binding		S66427	+	+					
Telinoblastoma-binding	retinoblastoma-binding.	5	S66431	+	+	+	+		+	
Telinoblastoma-binding	retinoblastoma-binding	. 1	X71810		+	+	+		+	
retinoblastoma-binding protein 7 (RBBP7) retinoblastoma-like 2 (p130) (RBL2) retinoic acid receptor responder (tazarotene nduced) 3 (RARRES3) retinoic acid receptor, alpha (RARA) retinoic acid receptor, alpha (RARA) retinoic acid responsive 1 (NN8-4AG) retinoid X receptor beta (RXR-beta) REV3 (yeast homolog)-like, catalytic subunit of DNA polymerase zeta (REV3L) RNo GDP dissociation inhibitor (GDI) beta (ARHGDIB) RNo GTPase activating protein 4 (ARHGAP4) RNo GTPase activating protein 4 (ARHGAP4) (low match) RNo-associated, coiled-coil containing protein kinase 2 (ROCK2) ribonuclease 6 precursor 2 U85625 + + + + + + +	retinoblastoma-binding	1	X74262		+	+	+		+	
retinoblastoma-like 2 (p130) (RBL2) retinoic acid receptor retinoic acid receptor responder (tazarotene nduced) 3 (RARRES3) retinoic acid receptor, alpha (RARA) retinoic acid receptor, 1 X06538 + + + + + + + + + + + + + + + + + + +	retinoblastoma-binding	1.	U35143							
retinoic acid receptor responder (fazarotene nduced) 3 (RARRES3) retinoic acid receptor, alpha (RARA) retinoic acid responsive (NN8-4AG) retinoic Acid receptor beta (RXR-beta) retinoid X receptor beta (RXR-beta) retinoid X receptor beta (RXR-beta) retinoid X receptor beta (RXR-beta) retinoid X receptor beta (RXR-beta) retinoid X receptor beta (RXR-beta) retinoid X receptor beta (RXR-beta) retinoid X receptor beta (REV3 (yeast homolog)-like, catalytic subunit of DNA polymerase zeta (REV3L) retinoit (GDI) beta (RARGDIB) retinoit (GDI) beta (RARGDIB) retinoit (ARRGDIB) retinoit (ARRGAP4) retinoit (ARRGAP4) retinoit (ARRGAP4) retinoit (ARRGAP4) (low match) retinoit (ARRGAP4) (low match) retinoit (ARRGAP4) (low match) retinoit (ARRGAP4) retinoit (AR	retinoblastoma-like 2	1	X76061		+	+	+		+	
retinoic acid receptor, alpha (RARA) retinoic acid responsive (NN8-4AG) retinoic acid responsive (NN8-4AG) retinoid X receptor beta 2	retinoic acid receptor responder (tazarotene	. 1	AF060228		+		+	+	+	
retinoic acid responsive (NN8-4AG) retinoid X receptor beta (RXR-beta) REV3 (yeast homolog)-like, catalytic subunit of DNA polymerase zeta (REV3L) Rho GDP dissociation inhibitor (GDI) beta (ARHGDIB) Rho GTPase activating protein 4 (ARHGAP4) Rho GTPase activating protein 4 (ARHGAP4) (low match) Rho-associated, coiled-coil containing protein kinase 2 (ROCK2) ribonuclease 6 precursor  1 U50383 + + + + + + + + + + + + + + + + + + +	retinoic acid receptor,	1.	X06538	+	+		+	-		
retinoid X receptor beta 2 X66424 + + + + + + RXR-beta) 2 RAF035537 catalytic subunit of DNA polymerase zeta (REV3L) Rho GDP dissociation inhibitor (GDI) beta (ARHGDIB) Rho GTPase activating protein 4 (ARHGAP4) Rho GTPase activating protein 4 (ARHGAP4) (low match) Rho-associated, coiled-coil containing protein kinase 2 (ROCK2) ribonuclease 6 precursor 2 U85625 + + + + + + + + + + + + + + + + + + +	retinoic acid responsive	. 1	U50383		+		+		+	
REV3 (yeast homolog)-like, catalytic subunit of DNA polymerase zeta (REV3L)  Rho GDP dissociation	retinoid X receptor beta	2	X66424		+	+	+		+	
Rho GDP dissociation 23 L07916 + + + + + + + + holibitor (GDI) beta (ARHGDIB)  Rho GTPase activating 2 X78817 + + horotein 4 (ARHGAP4)  Rho GTPase activating 1 P98171 protein 4 (ARHGAP4) (low match)  Rho-associated, coiled-coil 1 AB014519 containing protein kinase 2 (ROCK2)  ribonuclease 6 precursor 2 U85625 + + + + + + + + + + + + + + + + + + +	REV3 (yeast homolog)-like, catalytic subunit of DNA	1	AF035537					-		
Rho GTPase activating 2 X78817 + + +   Protein 4 (ARHGAP4)   Rho GTPase activating protein 4 (ARHGAP4) (low match)   Rho-associated, coiled-coil 1 AB014519   Containing protein kinase 2 (ROCK2)   Ribonuclease 6 precursor 2 U85625 + + + + + + +	Rho GDP dissociation inhibitor (GDI) beta	23	L07916	+	+	+	+	+	+	-
Rho GTPase activating protein 4 (ARHGAP4) (low match) Rho-associated, coiled-coil 1 AB014519 containing protein kinase 2 (ROCK2) ribonuclease 6 precursor 2 U85625 + + + + + + +	Rho GTPase activating	2 .	X78817	+	+			Γ	T	
Rho-associated, coiled-coil 1 AB014519 containing protein kinase 2 (ROCK2)	Rho GTPase activating protein 4 (ARHGAP4) (low	1	P98171	-						
ribonuclease 6 precursor 2 U85625 + + + + + + +	Rho-associated, coiled-coil containing protein kinase 2	1	AB014519							
		2	U85625	+ .	+	+	+	+	+	

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ribonuclease 6 precursor (RNASE6PL) (low match)	1	U85625		1					
ribonuclease, RNase A family, 2 (liver, eosinophil-	1	X55988	<del> </del>				+	İ	
derived neurotoxin) (RNASE2)									
ribonuclease/angiogenin inhibitor (RNH)	3	M36717	+	+	+	+	-	+	
ribonucleoside diphosphate reductase M1 subunit	1	X65708							
ribonucleotide reductase M2 polypeptide (non-exact 91%)	.1	P31350							
ribophorin I (RPN1)	1	Y00281	+	+-	+	+	H	+	
ribophorin II (RPN2)	1	Y00282	+	+	+	+	+	+	
ribosomal 18S rRNA	3	M10098		1			_		
ribosomal 28S RNA	1	M11167						•	
ribosomal phosphoprotein P0, 5'UTR (low match) Ribosomal protein	1	- D28418			i i				
ribosomal protein L10	1 20	125000	<u> </u>	<del> </del>		<u> </u>		L	
(RPL10)	30	L25899 P53025	+	+	+	+	+	+	high in many libraries
L10A (CSA-19)									
ribosomal protein L11 (RPL11)	4	X79234	+	+	+	+	+	+	Alveolar rhabdomyosarcoma
ribosomal protein L12 (RPL19)	2	L06505	+	+	+	+	+	+	
nbosomal protein L13 (PRL13)	1	P26373	+	+	+	+	+	+	high in many libraries
ribosomal protein L14 (RPL14)	. 4	D87735	. +	+	+	+.	+	+	high in many libraries
ribosomal protein L17 (RPL17)	4	X53777	+						blood only
ribosomal protein L18 (RPL18)	10	L11566	+	+	+	+		+	
ribosomal protein L18a (RPL18A) ribosomal protein L18a	5	L05093		+	+	+	+,	+	High in fetal adrenal gland and skin
homologue	15	X80821				+			
(RPL19)		X63527	+	+	+	+	+	+	
ribosomal protein L21 (RPL21)	6	U14967	+	+	+	+	+	+	
nbosomal protein L22 (RPL22)	3	D17652	+	+	+	+		+	
ribosomal protein L23 (RPL23)	2	X55954	+	+	+	+	+	+	high in many libraries
ribosomal protein L23a (RPL23A)	5	U37230	+	+	+	+	+	+	high in many libraries
ribosomal protein L26 (RPL26)	8	X69392	+	+	+	+	+	+	
ribosomal protein L27 (RPL27)	6	L05094	+	+	+	+		+	
ribosomal protein L27a (RPL27A)	10	U14968	+	+	+	+	+	+	
ribosomal protein L28 (RPL28)	6	U14969	+	+	+	+	-	+	
ribosomal protein L29 (RPL29)	6	U10248	+	+	+	+.	+	+	
ribosomal protein L3 (RPL3)	81		+	+	+	+	+	+	high in many libraries
ribosomal protein L3 homologue	81	X06323							
ribosomal protein L30 (RPL30)	6	X79238	+	+	+	+	+	+	high in lymphoma
ribosomal protein L30 (RPL30) (low score)	1	X79238		6		-			,
ribosomal protein L31 (RPL31)	10	X15940	+	+	+	+	+	+	High in alveolar rhabdomyosarcoma

								•	CICAOOOOOO
ribosomal protein L32 (RPL32)	3	X03342	+	+	+	+	+	+	*
ribosomal protein L33-like (RPL33L)	1	AF047440		+	+	+	$\vdash$	+	-
ribosomal protein L34 (RPL34)	5	L38941	<del></del> -	+	+	+	+	+	
ribosomal protein L34 (RPL34) (low match)	1	L38941		<del> </del>			-	┢	
ribosomal protein L37 (RPL37)	5	D23661	+	+	+	+	+	+	high in barstead
ribosomal protein L37a	4	X66699	+	+	+	+	+	+	high in many libraries
ribosomal protein L38 (PRL38)	1	Z26876	+	+	+	+	+	+	high in many libraries
ribosomal protein L4 (RPL4)	27	D23660	+	+	+	+	+	+	high in many libraries
RPL41)	. 4 :	AF025844		, <del>,</del>	7	7	: + :	+	nigh in many libraries
ribosomal protein L5 (RPL5)	14	U14966	+	+	+	+	+	+	High in alveolar rhabdomyosarcoma
ribosomal protein L5 (RPL5) (low match)	1	U14966							
ribosomal protein L6 (RPL6)	7	X69391	. +	+	+	+	+	+	high in many libraries
ribosomal protein L7 (RPL7)	.14	X52967	, <b>+</b>	.+	.+	+	+	+	high in conorm
ribosomal protein L7a (RPL7A)	15	M36072	+	+	. +	+	+	+	High in uterus, and seminoma
(RPL8)	. 5	228407	+	+	+	+	+	+	high in ovary
ribosomal protein L9 (RPL9)	10	U09953 .		+	+	+	+	+	
(RPS10)	5	U14972	+	+	+	+	+	+	high in many libraries
nbosomal protein S11 (RPS11)	4	X06617	+	+	+	+	+	+	high in many libraries
ribosomal protein S11 (RPS11) (low match)		AB007152							
ribosomal protein S12 (RPS12)	3 .	X53505.	+	+	+	+	+	+	high in many libraries
(RPS13)	2	L01124		+	+	+	+	+	
ribosomal protein S14 (RPS14)	12	M13934	+	+	+	+	+	+	
ribosomal protein S15 (RPS15)	2	M32405	+	+	+	+	+	+ .	
ribosomal protein S16 (RPS16)	3	M60854	+	+	+	+	+	+	High in prostate invasive tumor
ribosomal protein S17 (RPS17)	2	M13932	+	+	+	+	+	+	high in many libraries
ribosomal protein S18	8	X69150							7
ribosomal protein S19 (RPS19)	7	M81757	+	+	+.	+	+		high in many libraries
ribosomal protein S2 (RPS2)	4	X17206	+	+	+	+	+	+	high in many libraries
RIBOSOMAL PROTEIN SZ (RPS4)	2	P15880							
ribosomal protein S20 (RPS20) ribosomal protein S21	7	L06498	+	+	+	+	+		high in many libraries
(RPS21)	3	L04483	+	+	+	+	+	+	high in CD34+/CD38- hematopoietic cells and skin tumor
ribosomal protein S23 (RPS23)	3	D14530		+	+	+		+	
ribosomal protein S24 (RPS24)	7	M31520	+ .	+	.+	+	+	+	high in uterus
ribosomal protein S25 (RPS25)	3	M64716	+	+	+	+	+	+	high in barstead prostate
ribosomal protein S26 (RPS26)	2	X69654		+	+	+	+	+	
ribosomal protein S27 ((metallopanstimulin 1) (RPS27)	5	U57847	+	+	+		+	+	

Important   Impo										
(RPS29) mbosomal protein S3 (RPS3) (R		3	U58682	+	+	+	1.+.	Γ	+	
Image: Comparison   Imag	ribosomal protein S29 (RPS29)	2	U14973	+	++	+	+	+	+	
(RPS3) (low match) mbosomal protein S3A (RPS3A) (RPS3B) (RPS3B	(RPS3)	9	X55715	+	+	+	+	+	+	high in many libraries
Inbosomal protein S3A	ribosomal protein S3 (RPS3) (low match)	1	U14990		1	-	$\top$		-	
(RPS3A) (low score) inbosomal protein S4, X	ribosomal protein S3A	. 21	Z83334		+	+	+	+	+	high in many libraries
Inked (RFS4X)		1	M77234				†-			
Inbosomal protein S4, Y	linked (RPS4X)	. 9	M58458	+	+	+	+	-	+	high in overy and
RRPSS    RPSS    P10660   P1	linked (RPS4Y)	2	M58459	+	+	+	+	+	+	Oynoviai salcoma
(PHOSPHOPROTEIN NP33)  (RPS6)  (RPS6)  (RDS6)  (RDS0)	(RPS5)	ľ .	U14970	+	+	+	+	+	+.	high in lymphoma
(RPS6)	(PHOSPHOPROTEIN NP33)	1	P10660					-		*
(RPS6) (non-exact 86%)	(RPS6)	22	M20020	. +	+	+	+	+	Ŧ	
Kinase, 90kD, polypeptide   CRPS6kA1)   Robosomal protein S6   Kinase, 90kD, polypeptide   CRPS6kA2)   Robosomal protein S7   CRPS6kA2)   Robosomal protein S8   Robosomal protein S8   Robosomal protein S9   Robosomal protein S9   Robosomal protein, large, P0   Robosomal protein, large, P1   Robosomal protein, large, P1   Robosomal protein, large, P1   Robosomal protein, large, P1   Robosomal protein, large, P1   Robosomal protein, large, P1   Robosomal Protein, large, P1   Robosomal RNA 18S   Robosomal RNA 18S   Robosomal RNA 28S   Robosomal RNA 28S   Robosomal RNA 28S   Robosomal RNA 28S   Robosomal RNA 28S   Robosomal RNA 28S   Robosomal RNA 28S   Robosomal RNA 28S   Robosomal RNA 28S   Robosomal RNA 28S   Robosomal RNA 38S   Roboso	(RPS6) (non-exact 86%)	1	M77232							
Kinase, 90kD, polypeptide   2 (RPS6KA2)   7	ribosomal protein S6 kinase, 90kD, polypeptide 1 (RPS6KA1)	3	L07597	+	+	+	+		+	
(RPS7) ribosomal protein S8 (RPS8)  nibosomal protein S9 (RPS9)  nibosomal protein, large, P0 (RPLP0) nibosomal protein, large, P1 (RPLP1) nibosomal protein, large, P1 (RPLP1) nibosomal RNA 18S (=M10098; K03432) (=polyadenylating sequence) nibosomal RNA 28S  11  X03205  (=polyadenylating sequence) nibosomal RNA, 16S  1	kinase, 90kD, polypeptide 2 (RPS6KA2)	1	X85106			-		,		
(RPS9) ribosomal protein S9 (RPS9) nbosomal protein, large, P0 (RPLP0) ribosomal RNA 18S (=M10098; K03432) (=polyadenylating sequence) ribosomal RNA 16S ring finger protein (nonesact 58%) ring finger protein 4 (RNF4) ring zinc-finger protein RNA 18S ring finger protein 4 (RNF4) ring zinc-finger protein RNA (guanine-7-) methyltransferase (RNMT) RNA binding motif protein 5 (RBMS) RNA binding motif, single stranded interacting protein 2 (RBMS2) RNA helicase (putative), (Myc-regulated DEAD box protein) (RNA binding) RNA helicase related protein RNA helicase-related protein RNA pol II largest subunit  2 X74872	(RPS7)	4	Z25749		+	+	+	+	+.	
RPLP0    18	(RPS8)		X67247		+	+	+	+	+	
(RPLPd) ribosomal protein, large, P1	(RPS9)		U14971		1	,				colon tumor
(RPLP1)	(RPLP0)		M17885	Ţ		+			+	
(=M10098; K03432) (=polyadenylating sequence) ribosomal RNA 28S	(RPLP1)		M17886	T .	+	+		+		
Timbosomal RNA, 16S	(=M10098; K03432) (=polyadenylating	11.	X03205				- 7			
ribosomal RNA, 16S	ribosomal RNA 28S	2	M11167		1		$\vdash$			
Exact 58%	ribosomal RNA, 16S	1	U25123		$\vdash$		-1			
ring finger protein 3 (RNF3)		7						_		
RNA binding motif, single stranded interacting protein 2 (RBMS2)	ring finger protein 3 (RNF3)	1	AJ001019		-					
Ting zinc-finger protein   3	ring finger protein 4 (RNF4)	3			1	-			_	
RNA (guanine-7-) methyltransferase (RNMT) RNA binding motif protein 5 (RBM5) RNA binding motif, single stranded interacting protein 2 (RBMS2) RNA helicase (putative), (Myc-regulated DEAD box protein) (MRD8) RNA helicase-related PRNA pol II largest subunit  AB007858  + + + + + + + + + + + + + + + + + + +	ring zinc-finger protein							$\dashv$		
RNA binding motif protein 5 4 U23946 + + + + + + + + + + + + + + + + + + +	RNA (guanine-7-) methyltransferase (RNMT)	1	AB007858		+	+	+	$\dashv$	+	
RNA binding motif, single stranded interacting protein 2 (RBMS2) 2 (RBMS2) RNA helicase (putative), (Myc-regulated DEAD box protein) (MRD8) RNA helicase-related 1 AF083255 + + + + + RNA pol II largest subunit 2 X74872	RNA binding motif protein 5 (RBM5)	4	U23946	+	+	+	+	$\dashv$	+	<u> </u>
(Myc-regulated DEAD box protein) (MRD8)  RNA helicase-related 1 AF083255 + + + + + RNA pol II largest subunit 2 X74872	RNA binding motif, single stranded interacting protein 2 (RBMS2)	1	D28483		+		+		+	
protein RNA pol II largest subunit 2 X74872	(Myc-regulated DEAD box protein) (MRD8)		X98743	+	+	+	+	1	+	
<del> </del>	protein	1	AF083255	· · ·	+	+	+ †	7	+	
RNA polymerase I subunit 1 AF(0)8442		2	X74872			$\dashv$	$\dashv$	$\dashv$	$\dashv$	
(RPA40)	RNA polymerase I subunit (RPA40)	. 1	AF008442		+	+	十	$\dashv$	+	
RTVP-1 protein 2 X91911 + + + + +	RTVP-1 protein	2	X91911	+	+	+	++	+	+	

							-*		
S100 calcium-binding protein A10 (annexin II	2	M81457			+		+	+	
ligand, calpactin I, light polypeptide (p11))				- >					
(S100A10)	•					·			
S100 calcium-binding protein A11 (calgizzarin) (S100A11)	. 1	X80201			+	+		+	
S100 calcium-binding	3	M80563	В		+	┢	,+	-	
protein A4 (calcium protein, calvasculin, metastasin,		1							
murine placental homolog)(S100A4)							·		
S100 calcium-binding protein A8 (calgranulin A) (S100A8)	7	M21005			+	*		+	high in bone marrow
S100 calcium-binding protein A9 (calgranulin B) (S100A9)	14	X06233			+	+			high in invasive larynx squamous cell carcinoma
S164 gene	1	AF109907		1			-	$\vdash$	·
S-adenosylmethionine decarboxylase 1 (AMD1)	3	M88003	+	+	. +	+		+	
SB classil histocompatibility antigen alpha-chain	5	M27487	+	+	+	+		+	
SC35-interacting protein 1 (SRRP129)	5	AF030234	+	+	+	.+	+	+	
scaffold attachment factor B (SAFB)	1	U72355	+	+	+	+		+	·
scaffold attachment factor B (SAFB) (non-exact 78%)	1	U72355							
scRNA molecule, transcribed from Alu repeat	1	L13713							
SEC14 (S. cerevisiae)-like (SEC14L)	4	D67029		+	+	+		+	
SEC23-like protein B (SEC23B)	2	X97065	+	+	+	+		+	
SEC63 (SEC63)	1	AF100141		+	+		L	+	
secreted protein, acidic, cysteine-rich (osteonectin) (SPARC)	. 7	M25746		+	+	+	+	+	high in bone marrow stroma
secretory carner membrane protein 1 (SCAMP1)	1	AF038966		+		+			·
secretory carrier membrane protein 2 (SCAMP2)	1.	AF005038	+	+	+	+	+	+	
secretory carrier membrane protein 3 (SCAMP3)	. 1	AF005039							
secretory granule	1	M33649			-			-	
iambda-PG[6,7,8]) selectin L (lymphocyte	43	X17519	+			+		+	
adhesion molecule 1) (SELL)							L		
selectin P ligand (SELPLG)	13	U02297	+	+					
sema domain, immunoglobulin domain (lg), transmembrane	2	U60800		*,0		+		+	
domain (TM) and short cytoplasmic domain, (semaphorin) 4D			·						
(SEMA4D) Ser/Arg-related nuclear	· ·	AE048077		1		-	<u> </u>	Ļ	
matrix protein (plenty of prolines 101-like)	4 .	AF048977		+	+	+	+	+	·
(SRM160) serine palmitoyltransferase	<del></del>	Y08685		+	-+	+	<u> </u>	+	
subunit I (SPTI) serine palmitoyltransferase,	1		· .	+					
subunit II (LCB2)	<u> </u>	AB011098	+	L T	+	+		+	

serine protease	1 1	J02907	T	_	<del></del>		_		<del>                                     </del>
serine protease inhibitor.	<del>                                     </del>	U78095	<del> </del>		↓	<u> </u>	╄	4	**
Kunitz type, 2 (SPINT2)			+ ,	+	+	+	L	+	
serine/threonine kinase 10 (STK10)	1	AB015718	+	+	+	+		+	
serine/threonine kinase 19 (STK19)	1	L26260	+	+	•+	+		. 0	
serine/threonine kinase 4 (STK4)	1	U18297		+		<u> </u>		+	
serine/threonine protein kinase KKIALRE (KKIALRE)	1	X66358		+	+	+	$\vdash$	+.	
serine/threonine protein- kinase (NIK)	- 1	Y10256		+	+	+	╁	<del>  -</del>	
SERINE/THREONINE- PROTEIN KINASE RECEPTOR R3	1	P37023					-		1
PRECURSOR (SKR3) serologically defined colon cancer antigen 16 (NY-CO-	2	AF039694	<del>                                     </del>	-		-		╁	
16) serologically defined colon	1	AF039698	В, Т	+		<u> </u>	+	<u> </u>	
cancer antigen 33 (SDCCAG33)					`				
serologically defined colon cancer antigen 33 (SDCCAG33) (low score)	1	AF039698							
serologically defined colon cancer antigen 33 (SDCCAG33) (low score)	1	AF039698		-					
serum deprivation response (phosphatidylserine-binding	1	AF085481.1		1			-		*
protein) (SDPR) (=S67386) serum/glucocorticoid	· .	Vanana	- 4-			. :			*
regulated kinase (SGK)	. 2	Y10032	+	+	+	+		+	=
SET domain, bifurcated 1 (SETDB1)	2	D31891	+	+	+			+	
SH2 domain protein 1A, Duncan's disease lymphoproliferative	. !	AF073019	T.					+	
syndrome) (SH2D1A)		-							
SH3 binding protein (SAB)	2	AB005047	+	+	+	+		+	
SH3 domain protein 1B (SH3D1B)	4	U61167	+			+		+-	
SH3BGR PROTEIN (=21- GLUTAMIC ACID-RICH	1	P55822							
PROTEIN;21-GARP) (non- exact 82%aa) SH3-binding domain									
glutamic acid-rich protein like (SH3BGRL)	1	AF042081	-+	+	+	+		+	
SH3-domain GRB2-like 1 (SH3GL1)	1	U65999	+	+	+	+		+	
SHC (Src homology 2 domain-containing) transforming protein 1	2	X68148		+	+	+		+	
(SHC1) siah binding protein 1		Urarno							
(SiahBP1)	2	U51586		+	+	+		+	
siah binding protein 1 (SiahBP1) (non-exact, 69%)	1	U51586	·						
Sialomucin CD164 (CD164)	9	D14043							·
sialophonn (gpL115, leukosialin, CD43) (SNP)	2	J04536	<i>:</i>						
sialyltransferase (STHM)	1	U14550			-	+	$\neg$	+	
sialyltransferase 1 (beta- galactoside alpha-2,6- sialytransferase) (SIAT1)	2	X17247	+	+	+	+	+	+	-
								<u></u> 1	

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sialyltransferase 4A (beta- galactosidase alpha-2,3- sialytransferase) (SIAT4A)	1	AF059321	В	+	+.	-	+	+	
sialyltransferase 8 (alpha- 2, 8-polysialytransferase) D (SIAT8D)	1	L41680	,	+					
signal peptidase 25kDa subunit	1	L38950							
signal recognition particle 14kD (homologous Alu RNA-binding protein) (SRP14)	1	X73459	+.	+	+	+	+	+	
signal recognition particle 54kD (SRP54)	1	U51920			+	+		+	-
signal recognition particle ଥାଇ (SRP9)	2	U20998		. +	+ :	+	+	+,	
signal recognition particle receptor ('docking protein') SRPR		X06272	- 8						
signal regulatory protein, beta, 1 (SIRP-BETA-1)	5	Y10376		+				+	
signal sequence receptor, alpha (translocon- associated protein alpha) (SSR1)	2	Z12830				+	•	+	7. "
signal sequence receptor, beta (translocon- associated protein beta)	2	X74104	+	+	+	+		+	
(SSR2)	4	L41142	+	+	+	+	+	+	
activator of transcription (STAT5A)					·		Ľ		
signal transducer and activator of transcription 2, 113KD (STAT2)	1	U18671						+	
signal transducer and activator of transcription 3 (acute-phase response factor) (STAT3)	3	L29277							
signal transducer and activator of transcription 5A (STAT5A)	<b>2</b> :	U48730	+	+	+	+	+	+	
signal transducing adaptor molecule (SH3 domain and ITAM motif) 1 (STAM)	1	U43899							
silencing mediator of retinoid and thyroid hormone action (SMRT)		U37146			·				
similar to beta-transducin superfamily proteins (SAZD)		U02609	+	+	+			+	* *
similar to S. cerevisiae SSM4 (TEB4)	1	AB011169		+	+	+		+	
similar to yeast pre-mRNA splicing factors, Prp1/Zer1 and Prp6	1	AF026031	+	*	+	+		+	
SIT protein	1	AJ010059.1							•
Sjogren syndrome antigen A1 (52kD	2	M62800					+		
ribonucleoprotein autoantigen SS-A/Ro) (SSA1)			·						9
Sjogren syndrome antigen A1 (52kD,	1	M62800							
ribonucleoprotein autoantigen SS-A/Ro) (SSA1) (non-exact 63%) (match to zinc finger)	. *		· -						
SKAP55 homologue (SKAP-HOM)	1	AJ004886		+	+	+		+	
skb1 (S. pombe) homolog (SKB1)	2 :	AF015913	+	+	+	+	<del>                                     </del>	+	
	1		<u> </u>						<u> </u>

skeletal muscle abundant	т	X87613		<del>,</del>	<del> </del>		,		
protein		^0/013	+	*	+	+		+	
SMA3 (SMA3)	1	X83300	+	+		+	1	+	
small acidic protein	.3	U51678	+	+	+	+	١.	+	90
small EDRK-rich factor 2 (SERF2)	2	Y10351	+	+	+	+	+	+	high in fetal lung
small inducible cytokine A5 (RANTES) (SCYA5)	2	M21121	+	+	+	+	+	+	high in many libraries
small inducible cytokine subfamily C, member 2 (SCYC2)	. 1.	D63789						-	
small nuclear ribonucleoprotein polypeptide B" (SNRPB2)	. 2	M15841		+	+	+		+	
small nuclear ribonucleoprotein polypeptide N (SNRPN)	4	J04615	+ 1	+	+	+	+	+	
small nuclear ribonucleoprotein	2	J04564	+ +	+	+	+	-	+	<u> </u>
polypeptides B and B1 (SNRPB)							<i>;</i> ,		
small nuclear RNA activating complex, polypeptide 5, 19kD (SNAPC5)	1	AF093593	+	+	+	+		+	,
smallest subunit of ubiquinol-cytochrome c reductase	1	D55636	+	+	+	+	+,	+	high in fetal lung
SMC (mouse) homolog, X chromosome (SMCX)	7	L25270	+	+	+	+	-	+	
SMT3B protein (2)	2	X99585	+	+	+	+	+	+	
SNARE protein (YKT6) (low match)	. 1	U95735	<del> </del>	-		-	_	<u> </u>	· ·
SNC19	1	U20428	ļ					·	
SNC73 protein (SNC73)	2	J00220	+	L.,					ΕΕ
solute carrier family 1	2	U53347	T	+		+	+	+	high in many libraries
(neutral amino acid transporter), member 5 (SLC1A5)	-	000047		+		+	·	+	
Solute carrier family 11 (proton-coupled divalent metal ion transporters),	. 7	D50403	+						
member 1 (SLC11A1) solute carrier family 17	<del>1</del>	U90545					* .		
(sodium phosphate), member 3 (SLC17A3)	•	030343				+			
solute carrier family 19 (folate transporter),	1	U17566	B, lymphoma	+			+		
member 1 (SLC19A1) solute carrier family 2		K03195	+	+	+	+	+	•	
(facilitated glucose transporter), member 1 (SLC2A1)	· · · ·							+	
solute carrier family 23 (nucleobase transporters), member 2 (SLC23A2)	3	D87075		+	+	+		+	
solute carner family 25 (mitochondrial carner; oxoglutarate carner).	1	AF070548	В, Т	+	+		+	+	
member 11 (SLC25A11) solute carrier family 31 (copper transporters),	3	U83461		+		+	+		
member 2 (SLC31A2) solute carrier family 4,									
anion exchanger, member 2 (erythrocyte membrane protein band 3-like 1) (SLC4A2)	1	X62137		+	+			+	
solute carrier family 4, sodium bicarbonate	1	AB018282		+	-	$\dashv$	$\dashv$	_	

solute carrier family 7 (cationic amino acid transporter, y+ system), member 5 (SLC7A5)	2	M80244	1, W	1	+		+		
solute carrier family 7	3	D87432	+	+-	+	┼	├	+	
(cationic amino acid transporter, y+ system), member 6 (SLC7A6)									
solute carrier family 7	<del>                                     </del>	D87432	•	<u> </u>	<u> </u>	ـــــ	<u> </u>	<u> </u>	
(cationic amino acid transporter, y+ system), member 6 (SLC7A6) (non- exact 77%)		,				:			, ,
solute carrier family 9 (sodium/hydrogen exchanger), isoform 6	1	AF030409	111	+	+	+		+	·
(SLC9A6) somatic cytochrome c	2	M22877		_	<u> </u>		· -		·
(HCS) SON DNA binding protein	2	X63753		+	+	+		+	
(SON)		L13858			<u> </u>	L			
(Drosophila) homolog 1 (SOS1)			,+			+			
sorcin (SRI)	1	M32886			·				
sortilin 1 (SORT1) sortilin-related receptor,	6	X98248 Y08110		+		+		+	
L(DLR class) A repeats- containing (SORL1)		108110					-		
sorting nexin 1 (SNX1)	3	U53225	+	+	+	+		+	
sorting nexin 2 (SNX2)	.2 .	AF043453							
sorting nexin 6 (SNX6) (=U83194.1 TRAF4- associated factor 2)		AF121856.1						·	,
Sp3 transcription factor (SP3)	1	X68560	+	+.	+ ,,	+		+	
Sp3 transcription factor (SP3)	4	M97191	+	+	+	+		+	
special AT-rich sequence binding protein 1 (binds to nuclear matrix/scaffold- associating DNA's) (SATB1)	1	M97287			•				
speckle-type POZ protein (SPOP)	4 .	AJ000644							
speckle-type POZ protein (SPOP) (non-exact)	1	AJ000644							<u> </u>
spectrin SH3 domain binding protein 1 (SSH3BP1)	6	U87166	+	+	+	+			
Spectrin, alpha, non- erythrocytic 1 (alpha-fodrin) (SPTAN1)	2	J05243		+	+			+	
spermidine/spermine N1- acetyltransferase (SAT)	11	M55580					Î		
spermidine/spermine N1- acetyltransferase (SAT) (non-exact, 84%)	1	U40369							
spermine synthase (SMS)	1	AD001528	+	+	+	+	$\dashv$	+	<u></u>
SPF31 (SPF31)	1	AF083190	+ -	+	+	+	_	+	
sphingomyelin phosphodiesterase 1, acid lysosomal (acid sphingomyelinase) (SMPD1)		X52679	1 9	+	+		+		
SPINDLÍN HOMOLOG (PROTEIN DXF34)	1	Q99 <b>86</b> 5				寸	1	7	·
spinocerebellar ataxia 1 (olivopontocerebellar ataxia 1, autosomal dominant, ataxin 1) (SCA1)	3	X79204	В	+			+		

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spinocerebellar ataxia 2 (olivopontocerebellar ataxia	1	U70323	В			·	+		
2, autosomal dominant,	•		,						
ataxin 2) (SCA2)	<del></del>	A 1000F44						Ь	
spinocerebellar ataxia 7 (olivopontocerebellar	2	AJ000517	٠.	+					
atrophy with retinal degeneration) (SCA7)									
spliceosome associated protein (SAP 145)	3	U41371		+	+ .	+	+	+	Ŷ
splicing factor (CC1.3) (CC1.3)	2	L10910	+ .	+	+	+.	+	+	
splicing factor SRp40-1 (SRp40)	. 7.	U30826	· +	+	+	+	+	+	
splicing factor, arginine/serine-rich 11 (SFRS11)	3	M74002	В	+	+		+	+	
splicing factor, arginine/serine-rich 7 (35kD) (SFRS7)	4	L41887		+	+	+		+	
Src-like adapter protein (non-exact, 76%aa)	1 ,	U30473					7		* 10
Src-like-adapter (SLA)	6	D89077	*	+	+	+		+	
Src-like-adapter (SLA) (low match)	1.	D89077							20.50
Src-like-adapter (SLA) (low score)	1	U44403							
stannin (SNN)	2	AF030196	+	+	+	+		+	r.
STAT induced STAT inhibitor 3 (SSI-3)	1 .	AB004904	·			+			1
STE20-like kinase 3 (MST-3)	2	AF024636	+	+	+.	+		+	
step II splicing factor SLU7 (SLU7)	1 .	AF101074		+		.+.	+	+	
steroid sulfatase	1	M17591							
steroid sulfatase (microsomal), arylsulfatase C, isozyme S (STS)	1	J04964		+	+	.*			
sterol carrier protein 2 (SCP2)	1	. M55421		+	+	+	+	+	
sterol O-acyltransferase (acyl-Coenzyme A:	1	AF059202			٠,		+		
cholesterol acyltransferase) 1 (SOAT1)			·						
stimulated trans-acting factor (50 kDa) (STAF50)	6	X82200	+	+		+			
Striatin, calmodulin-binding protein (STRN) (low match, 71%aa)	1	U17989							
Stromal antigen 2 (STAG2)	2	Z75331			+	+	+	+	
stromal interaction molecule 1 (STIM1)	3 .	U52426	+	.+	+	+	-	+	
structure specific recognition protein 1	1	M86737		+	+	+		+	
(SSRP1) succinate dehydrogenase	5	L21936		$\vdash$	+	-	-		,
complex, subunit A, flavoprotein (Fp) (SDHA)	=				·				
succinate dehydrogenase complex, subunit B, iron sulfur (Ip) (SDHB)	1	U17248	+	+	+	+		+	
succinate dehydrogenase complex, subunit C, integral membrane protein, 15kD (SDHC)	<b>1</b>	U57877	+	+	+	+		+	
succinate dehydrogenase complex, subunit D, Integral membrane protein (SDHD)	3	AB006202		+	+		+		
succinate-CoA ligase, GDP-forming, beta subunit (SUCLG2)	1	AF058 <b>954</b>		+	+	+	+	+	

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succinyl CoA synthetase	1	Z68204	:					•	6
sudD (suppressor of	2	AF013591		+		-	+	+	
bimD6, Aspergillus	-	5			.				•
inidulans) homolog (SUDD)									
sulfotransferase family 1A,	1	L19999		+			+	+	
phenol-preferring, member		•		1		i			,
1 (SULT1A1)	·	TWATARA		-	لـنــا	<u> </u>		<u> </u>	
sulfotransferase family 1A, phenol-preferring, member	1	U37686	- 6						
3 (SULT1A3) (non-exact									•
67%)		•							
superoxide dismutase 1.	4	X02317		+	+		+	+	
soluble (amyotrophic lateral									
sclerosis 1 (adult)) (SOD1)				1					
superoxide dismutase 2,	5	. Y00985		+	+	+	+	+	
mitochondriel (SOD2)									11 1
supervillin (SVIL)	. 2	AF051851			+	+		+	
suppression of	2	. U15131		+		+		+	
tumorigenicity 5 (ST5)									
suppression of	1	U15779		1 :			1	i :	
tumorigenicity 5 (ST5) (non-exact 82%)		•							
suppressor of K+ transport	1 .	AF038960	<del></del>	<del> </del>	+	+			
defect 1 (SKD1)							'		,
suppressor of Ty	1	AF064804	. +	+	+	+	$\vdash$	+	
(S.cerevisiae) 3 homolog			1 1						
(SUPT3H)	10	<u> </u>	·		<u> </u>	Ŀ	L		
suppressor of Ty	2	U38817	+ ·	+	+	+	Γ_	+	•
(S.cerevisiae) 4 homolog 1	•	,	1 .	1			1	· ·	
(SUPT4H1)	2	U56402	<u> </u>	1-	,		<b>—</b>	-	
(S.cerevisiae) 5 homolog	4 .	U304UZ	[	+			1	+	
(SUPT5H)						ş-			
suppressor of Ty	2	U46691	+ :	+	+	+	+	+	
(S.cerevisiae) 6 homolog			1 .					1	
(SUPT6H)				<u> </u>		Ĺ		<u></u>	
suppressor of variegation	1	AF019968		+	+	+			
3-9 (Drosophila) homolog 1 (SUV39H1)	• :				1	l			
survival of motor neuron 1.	1	U18423	<b>_</b>	<del> </del>	<del> </del>	├	├	$\vdash$	
telomeric (SMN1)	•	0.0423	1			1			
SWI/SNF related, matrix	1	M88163	<del> </del>	+	+	+	ļ	+	<del> </del>
associated, actin	•		[·					l	
dependent regulator of				1					
chromatin, subfamily a,			- 1/2	1				1	l
member 1 (SMARCA1)				1	1		l	1	
(non-exact, 75%) SWI/SNF related, matrix	2	NOE4EE -	<b></b>	+		<u> </u>		<u> </u>	
associated, actin	4	D26155		<b>⊺</b>	1		1		
dependent regulator of			1 .	1					
chromatin, subfamily a,	·								
member 2 (SMARCA2)			<u> </u>			L_	L		·
SWI/SNF related, matrix	1	D26156	+	+.	+	+	+	+	•
associated, actin	'		1		<b>I</b> .	1		[	
dependent regulator of			·	1	1	1	I	1	
chromatin, subfamily a, member 4 (SMARCA4)				1		1	1		
SWI/SNF related, matrix	4	U66616	+	+-	+	+	+	+	<del></del>
associated, actin	•	3330.0	1	1	1	•	<u> </u>	Ι .	
dependent regulator of			1	1		1			
chromatin, subfamily c,	·		] .	1 .	1	1	1		
member 2 (SMARCC2)	-			1	L.	<u> </u>	ᄂ	<b>Ļ</b>	
SWI/SNF related, matrix	2	AF035262	B, W	+	+	١.	+	+	
associated, actin dependent regulator of		1	1	1			1	'	1
chromatin, subfamily e,				1			i		4
member 1 (SMARCE1)				1	1		l	1	
synaptobrevin-like 1	1	X95803	-	+	+	+		+	
(ŚYBL1)				1	1		1		·
synaptosomal-associated	2	AJ011915	· ·	+	+	+		+	
protein, 23kD (SNAP23)		<u> </u>		1					
syndecan binding protein	15	AF006636	+.	+	+	+	911	+	1
(syntenin) (SDCBP)	!	L	L		L			<u> </u>	<u> </u>

									C1/CA00/00005
synovial sarcoma, translocated to X	. 2	X79201		+.					90
chromosome (SSXT) syntaxin 16		AF038897	<u> </u>	-		-		1	
syntaxin 3A (STX3A)	2	U32315	. *	++		+	<u> </u>	+	
syntaxin 6 (STX6)	1	AJ002078.1	ļ	<u> </u>		<b>↓</b> ▼	┞	<u> </u>	
SYNTAXIN BINDING	1		<u> </u>	<u> </u>		<u> </u>	<u> </u>	L_	
PROTEIN 3 (UNC-18 HOMOLOG 3) (UNC-18C)		O00186		-		١.			
syntaxin-16C	1	AF008937	<del> </del>	┼──	-	<del>                                      </del>	├	$\vdash$	· · · · · · · · · · · · · · · · · · ·
SYT interacting protein (SIP)	1	AF080561		+	+	+	-	+	
T cell activation, increased late expression (TACTILE)	4	M88282				+		Ė	
T cell receptor V alpha gene segment V-alpha-7	-3.	X5874A	1						
(clone IĞRa11)		VENTIA				Ŀ			
gene segment V-alpha-w27	1	X58740		1 .		'	İ		
13 receptor-associating cofactor-1	5	583390	+	+	+	+	+	+	
tafazzin (cardiomyopathy,	1	X92763	+	+	_	+	<del> </del>	+-	
dilated 3A (X-linked); endocardial fibroelastosis	• •				l				
2; Barth syndrome) (TAZ)								1	•
TAFII100 protein (non- exact 53%)	1	U80191							
tankyrase, TRF1-	1	AF082556	<del> </del>	+	+.	+		+	
interacting ankyrin-related ADP-ribose polymerase								•	
(TNKS) TAP1, TAP2, LMP2, LMP7	- 1	X66401			·	_			
and DOB		X00401				·		·	
TAR DNA-binding protein- 43	6	U23731	+	+	+	+		+	
Tat interactive protein (60kD) (TIP60)	2	U40989	+	+	+	+.	·	+	
TATA box binding protein (TBP)-associated factor.	1	000268							
RNA polymerase II, C1, 130kD (TAF2C1) (non- lexact, 55%)								٠.	
TATA box binding protein	. 4	X97999	<b></b>	+	+	+	+	+	•
(TBP)-associated factor, RNA polymerase II, F, 55kD (TAF2F)									· •
TATA box binding protein	2	U21858		+ .	+	+	+	+	
(TBP)-associated factor, RNA polymerase II, G, 32kD (TAF2G)					·				
TATA box binding protein		D63705	+	+	+	+		+	•
(TBP)-associated factor, RNA polymerase II, I, 28kD	• .	233.00			•				;
(TAF2I) Tax1 (human T-cell	1	U33821		+	+	+	+	+	<u> </u>
leukemia virus type I) binding protein 1 (TAX1BP1)		·				·			
T-box 2 (TBX2) (non-exact 77%)	1	U28049			+	+		+	
TBP-associated factor 172 (TAF-172)	1	AJ001017		+		+		+	
T-cell death-associated gene 8 (TDAG8)	. 1	U95218				+	12		
T-cell leukemia/lymphoma 1A (TCL1A)	1	X82240	+						
T-cell leukemia/lymphoma 1A (TCL1A) (low match)	1	X82240							
T-cell receptor (delta D2- J1-region) (clone K3B)	7	M22197	_						
						_			

T-cell receptor (V beta 5.1, J beta 1.5, C beta 1) (low match)	1	M97705					ŀ		
T-cell receptor alpha delta (=M94081)	2	AE000662				$\vdash$			
T-cell receptor alpha enhancer-binding protein,	1	B39625			1	-			
short form (=X58636 Mouse LEF1 lymphoid enhancer binding factor 1									
(=D16503)) T-cell receptor delta gene	1	M22197			3.	ļ.	_	<u> </u>	
D2-J1-region, clone K3B T-cell receptor germline	1	M11955		<u></u>	·	-		Ŀ	
beta chain gene V-region (V) V-beta-MT1-1 1-ceii receptor germline		l .				,			:
beta-chain gene J2.1 exon  T-cell receptor germline	1 2	M14159 M22152	+	ļ	<u>.</u>	_	_	<u> </u>	only in blood
delta-chain D-J region T-cell receptor interacting	2	AJ224878				_		+	
molecule (TRIM) protein T-cell receptor rearranged delta-chain, V-region (V-	1	M21784			i i	-	:		
delta 3-J) T-cell receptor, alpha	3	AE000660	+	+	+	+	<u> </u>	. +	
(V,D,J,C) (TCRA) T-cell receptor, beta cluster		L34740	+	+	+	+	+	+	high in pancreas
(TCRB)  1-cell receptor, delta (V.D.J.C) (TCRD)	2	X73617		-	+	+	-	+	
T-cell, immune regulator 1 (TCIRG1)	3 .	U45285			<del> </del>		-	-	only found in tumor
TCF-1 mRNA for T cell factor 1	1	X59870			-				·
TCF-1 mRNA for T cell factor 1 (splice form B) (low match)	1	X59870							·
T-COMPLEX PROTEIN 1, ETA SUBUNIT (TCP-1- ETA) (CCT-ETA) (HIV-1	1	Q99832					*		
NEF INTERACTING PROTEIN)		•							
T-COMPLEX PROTEIN 1, THETA SUBUNIT (TCP-1- THETA) (CCT-THETA) (KIAA0002)	1	P50990							
TCR eta = T cell receptor(eta-exon) TCR V Beta 13.2	1	S94421							
TERA	1	X75419 AC004472						·	·
testis enhanced gene transcript (TEGT)	33	X75861	+	+	+	+	+	+	
tetracycline transporter-like protein (TETRAN)	2	L11669		+	.+	+		+	
tetratricopeptide repeat domain 1 (TTC1)	1	U46570	+	+	+	+		+	
tetratricopeptide repeat domain 2 (TTC2) tetratricopeptide repeat	1	U46571		+		+		+	100
domain 3 (TTC3) TGFB1-induced anti-	1	D84296	+	+	+	+		+	
apoptotic factor 1 (TIAF1)	3	D86970 S79851	+	+	+	+		+	
(TXNRD1) THIOREDOXIN-	1	P30048	. ·	+	+	+		+	
DEPENDENT PEROXIDE REDUCTASE PRECURSOR, mitochondrial (ANTI-	•								
OXIDANT PROTEIN 1) (AOP-1)			·						

Information   T(HISST)	threonyl-tRNA synthetase	1	M63180	T .	1 +	T +	+	Т	+	
International of TitriBST	(TARS)		777650		<u> </u>		_	L	Ŀ	
Intromboxane A synthase 1					<u> </u>		<u> Li</u>			
(platelet, cytochrome P450, subtrainly V, (TBAX21) Inlymine (IRBA21) Inlymine (IRBA22) Inlymine (IRBA2		<u>L</u>	1		1	+	1		<u> </u>	
milochondrial (TRZ) Ilbymindylale kinase (CDC8) I L16981	(platelet, cytochrome P450, subfamily V) (TBXAZ1)		M8U047		+		+	+	. *	
Illymidiyate kinase (CDC8)	thymidine kinase 2,	2	× X76104		+	+.	1	+		
Ilipynine-DNA glycosylase   2		1	L16991		+	+	+	<u> </u>	+	· · · · · · · · · · · · · · · · · · ·
(TMS810)  Itymosin, beta 4, X  chromosome (TMS84X)  Itymosin, beta 4, X  chromosome (TMS84X)  Itymosin, beta 4, X  chromosome (TMS84X)  Itymosin (G22P1)  Ithyroid autosatigen 70kD  (Ku antigen) (G22P1)  Ithyroid hormone receptor  coactivating protein  (SMAP)  Ityroid hormone receptor  interactor 3 (TRIP3)  Ityroid hormone receptor  sesociated protein, 230  KDa subunit (TRAP230)  Ityroid receptor interacting protein 15 (TRIP15)  ITAT cytoloxic granule- associated MAR-binding protein (TIA1)  Issue inhibitor of metalloproteinase 1  (entimotic potentialising protein (TIA1)  Issue inhibitor of metalloproteinase 2  (TIMP2)  Issue inhibitor of metalloproteinase 2  (TIMP2)  Issue inhibitor of metalloproteinase 2  (TIMP2)  Itsue inhibitor of metalloproteinase 2  (TIMP2)  Itsue inhibitor of metalloproteinase 2  (TIMP2)  Itsue inhibitor of metalloproteinase 1  (IMP2)  Issue inhibitor of metalloproteinase 2  (TIMP2)  Itsue inhibitor of metalloproteinase 1  (IMP2)  Issue inhibitor of metalloproteinase 2  (TIMP2)  Itsue inhibitor of metalloproteinase 3  (TIMP2)  Itsue inhibitor of metalloproteinase 1  (IMP2)  Issue inhibitor of metalloproteinase 1  (IMP2)  Issue inhibitor of metalloproteinase 2  (TIMP2)  Itsue inhibitor of metalloproteinase 3  (TIMP2)  Itsue inhibitor of metalloproteinase 2  (TIMP2)  Itsue inhibitor of metalloproteinase 3  (TIMP2)  Itsue inhibitor of metalloproteinase 3  (TIMP2)  Itsue inhibitor of metalloproteinase 4  (IMP2)  Issue inhibitor of metalloproteinase 4  (IMP2)  Itsue inhibitor of metalloproteinase 5  (TIMP2)  Itsue inhibitor of metalloproteinase 6  Itsue inhibitor of metalloproteinase 6  Itsue inhibitor of metalloproteinase 6  Itsue inhibitor of metalloproteinase 6  Itsue inhibitor of inhibitor 6  Itsue inhibitor of inhibitor 6  Itsue inhibitor of inhibitor 6  Itsue inhibitor of inhibitor 6  Itsue inhibitor of inhibitor 6  Itsue inhibitor of inhibitor 6  Itsue inhibitor of inhibitor 6  Itsue inhibitor of inhibitor 6  Itsue inhibitor 6  Itsue inhibitor 6  Itsue inhibitor 6  Itsue inhibitor 6  Its	thymine-DNA glycosylase (TDG)	2	U51166	+	+	+	+	-	+	
Chromosome (TMSB4X)   Thyroid subantigen (NCD)   Thyroid subantigen (NCD)   Thyroid subantigen (NCD)   Thyroid homone receptor   Thyroid homone receptor   Thyroid homone receptor   Thyroid homone receptor   Thyroid homone receptor   Thyroid homone receptor   Thyroid homone receptor   Thyroid homone receptor   Thyroid homone receptor   Thyroid homone receptor   Thyroid homone receptor   Thyroid homone receptor   Thyroid homone receptor   Thyroid homone receptor   Thyroid receptor micraciding   Thyroid receptor micraciding   Thyroid receptor micraciding   Thyroid receptor micraciding   Thyroid receptor micraciding   Thyroid receptor micraciding   Thyroid receptor micraciding   Thyroid receptor micraciding   Thyroid receptor micraciding   Thyroid receptor micraciding   Thyroid receptor micraciding   Thyroid receptor micraciding   Thyroid receptor micraciding   Thyroid receptor micraciding   Thyroid receptor   Thyroid   Thyr	(TMSB10)	2	M20259	+	+	+.	+	+	+	
(Ku antigen) (G22P1)	chromosome (TMSB4X)	29	M17733		+	+	+	ş.,	+	
Coactivating protein   (SMAP)   (SMAP)   (Interactor 7 (TRIP7)   (Interactor 7 (TRIP7)   (Interactor 7 (TRIP3)   (Interactor 7 (TRIP3)   (Interactor 8 (TRIP3)   (Interactor 8 (TRIP3)   (Interactor 8 (TRIP3)   (Interactor 8 (	(Ku antigen) (GŽ2P1)	7.		,					-	
Interactor 7 (TRIP7)	coactivating protein (SMAP)	1	AF016270		+		+	,	+	
Interactor 8 (TRIP8)	interactor 7 (TRIP7)	2	L40357		+	+	+		+	
associated protein, 230 (kDa subunit (TRAP230) (hytoid receptor interacting protein 15 (TRIP15) (TRIP15) (TRIP15) (TRIP15) (TRIP15) (TRIP15) (TRIP15) (TRIP15) (TRIP15) (TRIP15) (TRIP15) (TRIP16) (TRIP1	interactor 8r (TRIP8)				+					
Ithyloid receptor interacting protein 15 (TRIP15)   TI-227H   TI	associated protein, 230 kDa subunit (TRAP230)	1	D83783					·		
TIAT cytoloxic granule- associated RNA-binding protein (TIA1) tissue inhibitor of metalloproteinase 1 (crythroid potentiating activity, collagenase inhibitor) (TiMP1) tissue inhibitor of 1 metalloproteinase 2 (TIMP2) tissue specific transplantation antigen P336 (TSTA3) titin (T1N) 1 X64697 + + + + + + high in placenta  TINF receptor-associated factor 2 (TRAF2) TNF receptor-associated factor 3 (TRAF3) TNF receptor-associated factor 3 (TRAF3) TNF receptor-associated factor 6 (TRAF6) (flow match) toli-like receptor 1 (TLR1) toli-like receptor 2 (TLR2) toli-like receptor 2 (TLR2) toli-like receptor 4 (TLR4) toli-like receptor 5 (TILR5) topoisomerase (DNA) till toli-lopasiomerase (DNA) till t	thyroid receptor interacting protein 15 (TRIP15)	2	L40388	+	+	+	+			
associated RNA-binding protein (TIA1) lissue inhibitor of metalloproteinase 1 (erythroid potentiating activity, collagenase inhibitor (TIMP1) lissue inhibitor of metalloproteinase 2 (TIMP2) lissue specific 1 U58766 + + + + + + high in placenta (TIMP2) lissue specific 1 U58766 + + + + + + high in placenta (TIMP2) lissue specific 1 U58766 + + + + + + high in muscle (TIMP2) lissue specific 1 U58766 + + + + + + high in muscle (TIMP2) lissue specific 1 U58766 + + + + + + high in muscle (TIMP2) lissue specific 1 U78798 + + + + + high in muscle (TIMP3) litin (TIN) 1 X64697 + + + + + high in muscle (TIMP3) litin (TIN) 1 V84697 + + + + + + high in muscle (TIMP4) litin (TIN) 1 U78798 + + + + + + high in muscle (TIMP4) litin (TIN) 1 U88840 + + + + + + + + high in muscle (TIMP4) loli-like receptor-associated 1 U78798 + + + + + + + + + + + + + + + + + + +		. 1	D50525	<u> </u>			_			·
lissue inhibitor of metalloproteinase 1 (erythroid potentiating activity, collagenase inhibitor) (TIMP1)         1         X02598         +	associated RNA-binding	1	M77142		+	+	+		+	
metalloproteinase 1 (cerythroid potentiating activity, collagenase inhibitor) (TIMP1) lissue inhibitor of metalloproteinase 2 (TIMP2) lissue specific transplantation antigen P33B (TSTA3) litin (TIN) 1 X64697 + + + + + high in placenta  TNF receptor-associated 1 U12597 + + + + high in muscle  TNF receptor-associated 1 AF110908.1 + + + + high in muscle  TNF receptor-associated 1 U78798 + + + + + high in muscle  TNF receptor-associated 1 U78798   high in muscle  T	tissue inhibitor of	. 1 .	X02598	+	+	+	+	+	+	
Issue inhibitor of metalloproteinase 2 (TIMP2)	(erythroid potentiating activity, collagenase			*						
Inight in placenta   Inight	inhibitor) (TIMP1)									
transplantation antigen P35B (TSTA3)	metalloproteinase 2 (TIMP2)	1	M32304	+	+	+	+		+	high in placenta
TNF receptor-associated factor 2 (TRAF2) TNF receptor-associated factor 3 (TRAF3) TNF receptor-associated factor 6 (TRAF6) (low match) Toll-like receptor 1 (TLR1) Toll-like receptor 2 (TLR2) Toll-like receptor 4 (TLR4) Toll-like receptor 5 (TILR5) Topoisomerase (DNA) I Topoisomerase (DNA) II Topoisomerase (DNA) II Topoisomerase (DNA) III To	transplantation antigen	1	U58766	+	+	+	+		+	
factor 2 (TRAF2)  TNF receptor-associated factor 3 (TRAF3)  TNF receptor-associated factor 6 (TRAF6) (ilow match)  toll-like receptor 1 (TLR1)  toll-like receptor 2 (TLR2)  toll-like receptor 4 (TLR4)  toll-like receptor 5 (TILR5)  toll-like receptor 5 (TILR5)  toll-like receptor 5 (TILR5)  toll-like receptor 5 (TILR5)  toll-like receptor 5 (TILR5)  toll-like receptor 5 (TILR5)  toll-like receptor 5 (TILR5)  toll-like receptor 5 (TILR5)  toll-like receptor 5 (TILR5)  toll-like receptor 5 (TILR5)  toll-like receptor 5 (TILR5)  toll-like receptor 5 (TILR5)  toll-like receptor 5 (TILR5)  toll-like receptor 5 (TILR5)  toll-like receptor 5 (TILR5)  toll-like receptor 6 (TLR4)  toll-like receptor 6 (TLR4)  toll-like receptor 7 (TLR4)  toll-like receptor 8 (TLR4)  toll-like receptor 8 (TLR4)  toll-like receptor 9 (TLR4)  to	titin (TTN)	1	X64697	+	+	+	+		+	high in muscle
TNF receptor-associated factor 3 (TRAF3)  TNF receptor-associated factor 6 (TRAF6) (low match)  toll-like receptor 1 (TLR1)  toll-like receptor 2 (TLR2)  toll-like receptor 4 (TLR4)  toll-like receptor 5 (TILR5)  topoisomerase (DNA) II  topoisomerase (DNA) III  topoisomerase (DNA) III  topoisomerase (DNA) III  beta (180kD) (TOP2B)  topoisomerase (DNA) III  beta (TOP3B)  TR3beta  TRAF family member-  associated NF-kB activator (TANK)  TRANSALDOLASE  1 V8878  + + + + + + + + + + + + + + + + + + +	TNF receptor-associated	1	U12597		+	+	+	_	+	
TNF receptor-associated factor 6 (TRAF6) (low match)  tolFlike receptor 1 (TLR1)	TNF receptor-associated	1	AF110908.1		+	<u>:</u>	_	-		
toll-like receptor 1 (TLR1)	TNF receptor-associated factor 6 (TRAF6) (low	1	U78798		-					
toll-like receptor 2 (TLR2)	toll-like receptor 1 (TLR1)	1	U88540				+			
toll-like receptor 4 (TLR4)	toll-like receptor 2 (TLR2)	1		+	.+			$\dashv$	+	
topoisomerase (DNA) II	toll-like receptor 4 (TLR4)	1					-	++		<del></del>
topoisomerase (DNA) I	toll-like receptor 5 (TILR5)	1	AF051151		1		+	-+	$\dashv$	
beta (180kD) (TOP2É) topoisomerase (DNA) III		1	J03250		+	+	1	$\dashv$		
beta (TOP3B)  TR3beta	topoisomerase (DNA) II beta (180kD) (TOP2B)		X68060	+	+	+	+		+	·
TRAF family member- associated NF-kB activator (TANK) TRANSALDOLASE 1 P37837	topoisomerase (DNA) III beta (TOP3B)		D87012	+				$\dashv$	$\dashv$	
associated NF-kB activator (TANK) TRANSALDOLASE 1 P37837	1		D85245		+		$\dashv$	_		
troncoldologo 4 (TALINOS)	associated NF-kB activator (TANK)	3	U63830	+	+	+	+	+	+	
transaldolase 1 (TALDO1) 4 L19437 + + + + + +			P37837		1		$\dashv$	_	-	
	transaldolase 1 (TALDO1)	4	L19437		+	+	+	+	+	

transaldolase-related	1	AF010398	T .	T		Ι	Г	· ·	6-
protein							Ŀ	_	
transcobalamin II (TCII)	1	AF047576	<u> </u>	<u> </u>		·			٠.
transcription elongation factor B (SIII), polypeptide 1-like (TCEB1L)	2	Z47087	+	+	+	+		+	
transcription elongation factor B (SIII), polypeptide 3 (110kD, elongin A) (TCEB3)	1	L47345	+	+	+	+	<b>+</b>	+	
transcription factor 12 (HTF4, helix-loop-helix transcription factors 4) (TCF12)		M83233	. *	+	+	+		+	
transcription factor 17 (TCF17)	2	D89928		+		+		H	
transcription factor 4 (TCR4)	2	X52079		+	+	+		+	
transcription factor 6-like 1 (mitochondrial transcription factor 1-like) (TCF6L1)	2	M62810	+	+	+	+			
transcription factor 7-like 2 (T-cell specific, HMG-box) (TCF7L2)	1	Y11306		+	+	+		+	
transcription factor binding to IGHM enhancer 3 (TFE3	1	X96717	+	+	+	+	·	+	
transcription factor IL-4 Stat	7.	AF067575	+	+	.+	+	+	+	
transcription factor IL-4 Stat (low match)	. 1	U16031							
transcription factor ISGF-3 (=M97936)	4	M97935							
transcription factor REST	1	A56138							
transcription factor TFIID	1	Z22828							
transcriptional adaptor 2 (ADA2, yeast, homolog)- like (TADA2L)		AF064094							, , , , , , , , , , , , , , , , , , ,
transcriptional intermediary factor 1 (TIF1) (non-exact 72%)	1	AF009353	·				-		
transducin (beta)-like 1 (TBL1)	1	Y12781	+ .	+	+	+		+	
transducin-like enhancer of split 3, homolog of Drosophila E(sp1) (TLE3)	1	M99438	. +	. +			_		
Transformation/transcription domain-associated protein (TRRAP)	1	AF076974	+	+	+	+		+	
transformation-sensitive, similar to Saccharomyces cerevisiae STI1 (STI1L)	2	M86752		+	+	+		*	
transforming growth factor beta-activated kinase 1 (TAK1) (non-exact 78%)	1	AB009356				<del> </del>			
transforming growth factor beta-stimulated protein TSC-22 (TSC22)	3	AJ222700	+ .	+	+	+		+	
transforming growth factor, beta receptor III (betaglycan, 300kD)	1	L07594		+	+	+		+	
(TGFBR3) transforming growth factor, beta-induced, 68kD	2	4507466	+	+	+	+	+	+	
(TGFBI)	2	Q15582				_	_		
GROWTH FACTOR-BETA INDUCED PROTEIN IG-H3 PRECURSOR (BETA IG- H3)		Q 10002	·						
transforming, acidic coiled- coil containing protein 1 (TACC1) (non-exact 70%)	1	AF049910							

WO 00/40/49									.1/CA00/00003
transgelin 2 (TAGLN2)	14	D21261	+	+	+	+	+	+	
transgelin 2 (TAGLN2) (non-exact)	1	D21261						·	
trans-Golgi network protein (46, 48, 51kD isoforms) (TGN51)	2	AF029316		+		+			
transient receptor potential channel 1 (TRPC1)	. 1-	X89066		. +	+	+		+	
transketolase (Wernicke- Korsakoff syndrome) (TKT)	. 7	L12711		+	+.	+		+	
translation factor sui1 homolog (GC20)	1 .	AF064607		+	+	+	+	Ŧ	
translin (TSN)	3	X78627	+	+	+	+		+	• • •
translin-associated factor X (TSNAX)	1	X95073		+	+	+		+	
transmembrane glycoprotein (A33)	1 . 1	U79725				-			
transmembrane protein (63kD), endoplasmic reticulum/Golgi	1	X69910	+	+	+	+		+	
intermediate compartment (P63)		·			,		,		
transmembrane protein 1 (TMEM2)	1	AB001523	4	+		+		+	
TRANSMEMBRANE PROTEIN SEX PRECURSOR (non-exact 65%)	1	P51805			•				
transmembrane trafficking protein (TMP21)	2	X97442	+	+	+	+	+	+	
transporter 1, ABC (ATP binding cassette) (TAP1)	3	L21208	+	+	+.	+		+	
Treacher Collins- Franceschetti syndrome 1 (TCOF1)	2	U40847	+	+	+	+		+	high in many libraries
triosephosphate isomerase 1 (TPI1)	2	X69723	+	+	+	+	+	+	
tropomyosin	2	X04201		+	+	+		+	
tropomyosin 4 (TPM4)	2	X05276	+	+	+	+		+	
TRPM-2 protein	2	M63376							
tryptase I precursor (non- exact 64%)(=P20231)	1	A35863							
tryptophan rich basic protein (WRB)	1	Y12478		·					
tryptophanyl-tRNA synthetase (WARS)	1	X59892	+	+	+	+	+	+	
Ts translation elongation factor, mitochondrial (TSFM)	1	L37936	+	+		+		+	
ttopoisomerase (DNA) II beta (180kD)	1	Z15115		+	+			+	
Tu translation elongation factor, mitochondrial (TUFM)	4	L38995							
tuberous scierosis 1 (TSC1)	1	AF013168		+	+	+		+	
tuberous sclerosis 2 (TSC2)	1	X75621		+	+	+		+	
tubulin, alpha 1 (testis specific) (TUBA1)	, 1	X06956	,	+			+		_:
tubulin, alpha, ubiquitous (K-ALPHA-1)	11	K00558	+	+	+	+	+	+	high in many librarie
tubulin, alpha, ubiquitous (K-ALPHA-1) (low match)	1	K00558	-4						
tubulin-specific chaperone c (TBCC)	. 1	U61234		+	1,+	+		+	
tumor necrosis factor (ligand) superfamily, member 10 (TNFSF10)	7	U37518		+	+	+		+	

((i)gand) superfamily,				16						•
Limon necrosis factor	tumor necrosis factor (ligand) superfamily, member 13 (TNFSF13)	1	AF046888	+ :	+		+		+	5
Lumor necrosis factor (iligand) superfamily, member 6 (TNFSP8) member 6 (TNFSP8) member 6 (TNFSP8) member 6 (TNFSP8) member 6 (TNFSP8) member 6 (TNFSP8) member 6 (TNFSP8) member 7 (TNFSP8) member 7 (TNFSP8) member 7 (TNFSP7) member 7 (TNFSP7) member 7 (TNFSP7) member 7 (TNFSP7) member 7 (TNFSP7) member 7 (TNFSP7) member 7 (TNFSP7) member 10c, decoy without an intracellular domain (TNFSP7) member 7 (TNFSP7) member 7 (TNFSP7) member 10c, decoy without an intracellular domain (TNFSP7) member 10c, decoy without an intracellular domain (TNFSP7) member 10c, decoy without an intracellular domain (TNFSP7) member 10c, decoy without an intracellular domain (TNFSP7) member 10c, decoy without an intracellular domain (TNFSP7) member 10c, decoy without an intracellular domain (TNFSP7) member 10c, decoy with domain (TNFSP7) member 10c, deco	tumor necrosis factor (ligand) superfamily, member 14 (TNFSF14)	1,	AF036581							
(tigand) superfamily, member 8 (TNFSF8) tumor necrosis factor superfamily member 10 (TINFSF9) tumor necrosis factor superfamily member 10 (TINFSF10B) tumor necrosis factor superfamily member 10 (TINFSF10B) tumor necrosis factor superfamily member 100 (TINFSF10B) tumor necrosis factor superfamily member 100 (TINFSF10B) tumor necrosis factor superfamily, member 100 (ASSP 100	tumor necrosis factor (ligand) superfamily, member 6 (TNFSF6)	1	D38122	+						Found only in library 386: T-cell lymphoma
alpha-inducible cellular protein containing leucine zipoer domains (FIP2) tumor necrosis factor receptor superfamily member 7 (FINRS 7) tumor necrosis factor receptor superfamily member 10b (FINRS 7) tumor necrosis factor receptor superfamily member 10b (FINRS 7) tumor necrosis factor receptor superfamily member 10b (FINRS 7) tumor necrosis factor receptor superfamily member 10b (FINRS 7) tumor necrosis factor receptor superfamily member 10b (FINRS 710b) tumor necrosis factor receptor superfamily member 10b (FINRS 710b) (non-exact 84%) tumor necrosis factor receptor superfamily member 12b (FINRS 712b) tumor necrosis factor receptor superfamily, member 11b (FINRS 712b) tumor necrosis factor receptor superfamily, member 14b (herpesvirus entry mediator) (FINRS 712b) tumor necrosis factor receptor superfamily, member 14b (herpesvirus entry mediator) (FINRS 714b) tumor necrosis factor receptor superfamily, member 14b (herpesvirus entry mediator) (FINRS 714b) tumor necrosis factor receptor superfamily, member 17b (FINRS 71b) tumor necrosis factor receptor superfamily, member 17b (FINRS 71b) tumor necrosis factor receptor superfamily, member 17b (FINRS 71b) tumor necrosis factor receptor superfamily, member 17b (FINRS 71b) tumor necrosis factor receptor superfamily, member 17b (FINRS 71b) tumor necrosis factor receptor superfamily, member 17b (FINRS 71b) tumor necrosis factor receptor superfamily member 17b (FINRS 71b) tumor necrosis factor receptor superfamily financial factor receptor superfamily financial factor receptor superfamily financial factor receptor superfamily financial factor receptor superfamily financial factor receptor superfamily financial factor receptor superfamily financial factor receptor superfamily financial factor receptor superfamily financial factor receptor superfamily financial factor receptor superfamily financial factor receptor superfamily financial factor receptor superfamily financial factor receptor superfamily financial factor receptor superfamily financial factor receptor superfami	tumor necrosis factor (ligand) superfamily, member 8 (TNFSF8)	1	£09753	B only					·	
receptor superfamily member 7 (TNFRSF1) tumor necrosis factor receptor superfamily, member 10b (NFRSF10B) tumor necrosis factor receptor superfamily, member 10b, Geocy without an intracellular domain (NFRSF10C) tumor necrosis factor receptor superfamily, member 10d, decoy with truncated death of the superfamily member 10d, decoy with truncated death of the superfamily member 10d, decoy with truncated death of the superfamily member 10d, decoy with truncated death of the superfamily member 10d, franslocating member 10d, franslocating nembers 12 (Translocating chain-association membrane protein) (TNFRSF12) tumor necrosis factor receptor superfamily, member 12 (NFRSF12) tumor necrosis factor receptor superfamily, member 18 (TNFRSF18) tumor necrosis factor receptor superfamily, member 18 (TNFRSF18) tumor necrosis factor to superfamily, member 18 (TNFRSF18) tumor necrosis factor to superfamily, member 18 (TNFRSF18) tumor necrosis factor to superfamily, member 18 (TNFRSF18) tumor necrosis factor to superfamily, member 18 (TNFRSF18) tumor necrosis factor to superfamily, member 18 (TNFRSF18) tumor necrosis factor to superfamily, member 18 (TNFRSF18) tumor necrosis factor to superfamily, member 18 (TNFRSF18) tumor necrosis factor to superfamily, member 18 (TNFRSF18) tumor necrosis factor to superfamily, member 18 (TNFRSF18) tumor necrosis factor to superfamily, member 18 (TNFRSF18) tumor necrosis factor to superfamily, member 18 (TNFRSF18) tumor necrosis factor to superfamily, member 18 (TNFRSF18) tumor necrosis factor to superfamily, member 18 (TNFRSF18) tumor necrosis factor to superfamily, member 18 (TNFRSF18) tumor necrosis factor to superfamily, member 18 (TNFRSF18) tumor necrosis factor to superfamily, member 18 (TNFRSF18) tumor necrosis factor to superfamily, member 18 (TNFRSF18) tumor necrosis factor to superfamily, to superfamily, to superfamily, to superfamily, to superfamily, to superfamily, to superfamily, to superfamily, to superfamily, to superfamily, to superfamily, to superfamily, to superfamily, to supe	tumor necrosis factor alpha-inducible cellular protein containing leucine zipper domains (FIP2)				+	+	+		+	
receptor superfamily, member 10C, decoy without an intracellular domain (TNFRSF10B)   umor necrosis factor receptor superfamily, member 10C, decoy without an intracellular domain (TNFRSF10C)   umor necrosis factor receptor superfamily   receptor superfamily   umor necrosis factor receptor superfamily   receptor superfamily   umor necrosis factor receptor superfamily   receptor superfamily   umor necrosis factor receptor superfamily   receptor superfamily   umor necrosis factor receptor superfamily   receptor superfamily   remember 12 (TNFRSF12)   umor necrosis factor receptor superfamily   receptor superfamily   remember 18 (TNFRSF18)   umor necrosis factor receptor superfamily   receptor superfamily   remember 17 (TNFRSF18)   umor necrosis factor receptor superfamily   receptor superfamily   remember 18 (TNFRSF18)   umor necrosis factor   receptor superfamily   receptor superfamily   receptor superfamily   remember 17 (TNFRSF19)   umor necrosis factor   receptor superfamily   receptor superfamily   receptor superfamily   remember 17 (TNFRSF7)   umor process factor   receptor superfamily   receptor superfamily   receptor superfamily   remember 17 (TNFRSF7)   umor process factor   2	receptor superfamily member 7 (TNFRSF7)	2			+			+		
receptor superfamily, member 10c, decoy without an intracellular domain (TNFRSF10C) tumor necrosis factor receptor superfamily, member 10d, decoy with truncated death domain (TNFRSF10D) (non-excat 84%) tumor necrosis factor receptor superfamily, member 10d, decoy with truncated death domain (TNFRSF10D) (non-excat 84%) tumor necrosis factor receptor superfamily, member 10d, framslocating chain-association membrane protein) (TNFRSF12) tumor necrosis factor receptor superfamily, member 1d, framslocating chain-association receptor superfamily, member 1d, framslocating chain-association receptor superfamily, member 1d, framslocating chain-association receptor superfamily, member 1d, framslocating chain-association receptor superfamily, member 1d, framslocating chain-association receptor superfamily, member 1d, framslocating chain-induced protein chain-induced protein 2 (TNFRSF18) tumor necrosis factor receptor superfamily, member 6 (TNRSF6) tumor necrosis factor, alpha-induced protein 3 (TNFAIP3) tumor necrosis factor, alpha-induced protein 3 (TNFAIP3) tumor protein 53-binding protein, 1 (TP53BP1) tumor protein p53-binding protein, 1 (TP53BP1) tumor protein p53-binding protein, 1 (TP53BP1) tumor protein, 35 X16084 translationally-controlled 1 (TPT1) (tow score) tumor protein, and the state of the state	receptor superfamily, member 10b (TNFRSF10B)	1	AF016266		+		+	+	+	
iumor necrosis factor receptor superfamily, member 10d, decoy with truncated death domain (TNFRSF10D) (non-exact 84%)	receptor superfamily, member 10c, decoy without an intracellular domain	3	AF012629					+		
(non-exact 84%) tumor necrosis factor receptor superfamily, member 12 (translocating chain-association membrane protein) (TNFRSF12) tumor necrosis factor receptor superfamily, member 14 (herpesvirus entry mediator) (TNFRSF12) tumor necrosis factor receptor superfamily, member 14 (herpesvirus entry mediator) (TNFRSF18) tumor necrosis factor receptor superfamily, member 18 (TNFRSF18) tumor necrosis factor receptor superfamily, member 6 (TNFRSF18) tumor necrosis factor receptor superfamily, member 7 (TNFRSF17) tumor necrosis factor receptor superfamily, member 7 (TNFRSF7) tumor necrosis factor alpha-induced protein 2 (TNFAIP3) tumor necrosis factor, alpha-induced protein 3 (TNFAIP3) tumor protein 53-binding protein, 1 (TP53BP1) tumor protein p53 (U-fraumer) protein p53 (U-fraumer) protein p53 (U-fraumer) protein p53 (U-fraumer) protein p53 (U-fraumer) protein p53 (U-fraumer) protein p53-binding protein (TP53BPL) tumor protein p53-binding protein (TP53BPL) tumor protein p53-binding protein (TP53BPL) tumor protein p53-binding protein (TP53BPL) tumor protein p53-binding protein (TP53BPL) tumor protein p53-binding protein (TP53BPL) tumor protein p53-binding protein (TP53BPL) tumor protein, alpha-induced protein (TP53BPL) tumor protein, alpha-induced protein (TP53BPL) tumor protein, alpha-induced	tumor necrosis factor receptor superfamily, member 10d, decoy with truncated death	1.	AF023849							found only in prostate
member 12 (translocating chain-association membrane protein) (INFRSF12) (INFRSF12) (INFRSF14) (INFRSF14) (INFRSF14) (INFRSF14) (Infrest) (INFRSF14) (Infrest) (INFRSF18) (Infrest) (INFRSF18) (Infrest) (INFRSF18) (Infrest) (INFRSF18) (Infrest) (INFRSF18) (Infrest) (INFRSF18) (Infrest) (INFRSF18) (Infrest) (INFRSF18) (Infrest) (INFRSF18) (Infrest) (INFRSF18) (Infrest) (INFRSF18) (Infrest) (INFRSF18) (Infrest) (INFRSF18) (Infrest) (INFRSF18) (Infrest) (Inf	(non-exact 84%)	. 1	U94508	+	+	+	+		+	
tumor necrosis factor receptor superfamily, member 14 (herpesvirus entry mediator) (TNFRSF14) (tumor necrosis factor receptor superfamily, member 18 (TNFRSF18) (tumor necrosis factor receptor superfamily, member 18 (TNFRSF18) (tumor necrosis factor receptor superfamily, member 6 (TNFRSF6) (tumor necrosis factor receptor superfamily, member 6 (TNFRSF7) (tumor necrosis factor receptor superfamily, member 7 (TNFRSF7) (tumor necrosis factor, alpha-induced protein 2 (TNFRSF7) (tumor necrosis factor, alpha-induced protein 3 (TNFAIP2) (tumor necrosis factor, alpha-induced protein 3 (TNFAIP3) (tumor protein 53-binding protein, 1 (TP53BP1) (tumor protein 53-binding protein, 1 (TP53BP1) (tumor protein p53-binding protein, (TP53BPL) (tumor protein, translationally-controlled 1 (TPT1) (tow score) (tumor protein, translationally-controlled 1 (TPT1) (tow score) (tumor protein, translationally-controlled 1 (TPT1) (tow score) (tumor protein, translationally-controlled 1 (TPT1) (tow score)	member 12 (translocating chain-association membrane protein)									
tumor necrosis factor receptor superfamily member 18 (TNFRSF1B) tumor necrosis factor receptor superfamily, member 18 (TNFRSF6) tumor necrosis factor receptor superfamily, member 6 (TNFRSF6) tumor necrosis factor receptor superfamily, member 7 (TNFRSF7) tumor necrosis factor, alpha-induced protein 2 (TNFAIP2) tumor necrosis factor, alpha-induced protein 3 (TNFAIP3) tumor protein 53-binding protein, 1 (TP53BP1) tumor protein p53-binding protein, 1 (TP53BPL) tumor protein p53-binding protein (TP53BPL) tumor protein p53-binding protein (TP53BPL) tumor protein p53-binding protein (TP53BPL) tumor protein p53-binding protein (TP53BPL) tumor protein p53-binding protein (TP53BPL) tumor protein p53-binding protein (TP53BPL) tumor protein p53-binding protein (TP53BPL) tumor protein, alpha-induced protei	tumor necrosis factor receptor superfamily, member 14 (herpesvirus entry mediator)	1	U70321	+	+	+	+	·	+	
tumor necrosis factor receptor superfamily, member 6 (TNFRSF6) tumor necrosis factor receptor superfamily, member 7 (TNFRSF7) tumor necrosis factor, alpha-induced protein 2 (TNFAIP2) tumor necrosis factor, alpha-induced protein 3 (TNFAIP3) tumor protein 53-binding protein, 1 (TP53BP1) tumor protein p53 (Li- 1 M14695 + + + + + + + + + + + + + + + + + + +	tumor necrosis factor receptor superfamily.	_ 5	U52165	+	+	+.	+	-	+	
receptor superfamily, member 7 (TNFRSF7)  Rumor necrosis factor, alpha-induced protein 2 (TNFAIP2)  Rumor necrosis factor, alpha-induced protein 3 (TNFAIP3)  Rumor protein 53-binding protein, 1 (TP53BP1)  Rumor protein p53 (Li- 1 M14695 + + + + + + + + + + + + + + + + + + +	tumor necrosis factor receptor superfamily, member 6 (TNFRSF6)	1	X63717	B, W					+	
alpha-induced protein 2 (TNFAIP2) (tumor necrosis factor, alpha-induced protein 3 (TNFAIP3) (tumor protein 53-binding protein, 1 (TP53BP1) (tumor protein p53 (Li-	tumor necrosis factor receptor superfamily, member 7 (TNFRSF7)	1	M63928	+	+					
alpha-induced protein 3 (TNFAIP3)  fumor protein 53-binding protein, 1 (TP53BP1)  fumor protein p53 (Li-  fraumeni syndrome) (TP53)  Tumor protein p53-binding protein (TP53BPL)  fumor protein, translationally-controlled 1 (TPT1)  fumor protein, translationally-controlled 1 (TPT1) (low score)  fumor projection antigen 9 X15187 + + + + + + + + + + + + + + + + + + +	alpha-induced protein 2 (TNFAIP2)				+	+		+		
protein, 1 (TP53BP1) Tumor protein p53 (Li- Fraumeni syndrome) (TP53) Tumor protein p53-binding Tumor protein p53-binding Tumor protein (TP53BPL) Tumor protein, Translationally-controlled 1 (TPT1) Tumor protein, Translationally-controlled 1 (TPT1) Tumor protein, Translationally-controlled 1 (TPT1) (low score) Tumor rejection antigen  9 X15187 + + + + + + + + + + + + + + + + + + +	alpha-induced protein 3 (TNFAIP3)	•								
Fraumeni syndrome) (TP53)  Tumor protein p53-binding protein (TP53BPL)  tumor protein, translationally-controlled 1 (TPT1)  tumor protein, translationally-controlled 1 (TPT1)  tumor protein, translationally-controlled 1 (TPT1) (low score)  tumor rejection antigen 9 X15187 + + + + + + + + + + + + + + + + + + +	protein, 1 (TP53BP1)		AF078776		+	+	+		+	·
protein (TP53BPL) tumor protein, translationally-controlled 1 (TPT1) tumor protein, translationally-controlled 1 (TPT1) (low score) tumor rejection antigen 9 X15187 + + + + + +	tumor protein p53 (Li- Fraumeni syndrome) (TP53)		M14695	+	+.				+	
translationally-controlled 1 (TPT1)  Lumor protein, translationally-controlled 1 (TPT1) (low score)  Lumor rejection antigen 9 X15187 + + + + + + +	Tumor protein p53-binding protein (TP53BPL)			+			+		+	
translationally-controlled 1 (TPT1) (low score)  tumor rejection antigen 9 X15187 + + + + + +	translationally-controlled 1 (TPT1)									
	tumor protein, translationally-controlled 1 (TPT1) (low score)									
	tumor rejection antigen (gp96) 1 (TRA1)	9	X15187	<b>+</b> :	+	+	+	+	+	

Corosophila  homolog	tumorous imaginal discs	2	XEDE474D	<del>,</del>		,			, .	
Spee   Imitegral membrane	(Drosophila) homolog		AF061749		<b> </b> *					
protein (NKG2-E)	TXK tyrosine kinase (TXK)	2	L27071	<del> </del>	<del> </del>	_	+	╁	╁	
Invertise   Inve		1	AJ001685		+	<del>                                     </del>	+	+	╫	found only in fetal
kinase binding protein (TYROBP) (IYROBP				<u> </u>						
monoxygenase/hyptopha n 5-monoxygenase activation protein, beta polypeptide (YVHAB) (yrosine 3-monoxygenase) activation protein, beta polypeptide (YVHAB) (yrosine 3-monoxygenase) activation protein, zeta polypeptide (YVHAB) (yrosine 3-monoxygenase) activation protein, zeta polypeptide (YVHAB) (yrosine 3-monoxygenase) activation protein, zeta polypeptide (YVHAB) (yrosine 3-monoxygenase) activation protein, zeta polypeptide (YVHAB) (yrosine 3-monoxygenase) (yrosine inase z (YVRZ) yrosine z (YVRZ) yrosine z	kinase binding protein	3.	AF019562			+	Ī.			
inchoxygenaseAryptopha in 5-monoxygenase activation protein, beta polypeptide (YWHAB) in 5-monoxygenaseAryptopha in 5-monoxygenaseAryptopha in 5-monoxygenaseAryptopha in 5-monoxygenaseAryptopha in 5-monoxygenaseAryptopha in 5-monoxygenaseAryptopha in 5-monoxygenaseAryptopha in 6-monoxygenaseAryptopha	. 1	X57346	+	+	+	+	+	+	high in ecnorm	
polypeptide (YVVHAB)	n 5-monooxygenase						-			
monoxygenase dryptophs   n	polypeptide (YWHAB)				1					* * *
n.5-monoxygenase activation protein, zeta polypeptide ( YWHAZ) Iyrosine 3-monoxygenase activation protein, zeta polypeptide ( YWHAZ) IYROSINE-PROTEIN 2 IYROSINE-PROTEIN 2 IYROSINE-PROTEIN 2 IYROSINE-PROTEIN 2 IYROSINE-PROTEIN 2 IYROSINE-PROTEIN 3 IYROSINE-PROTEIN 3 IYROSINE-PROTEIN 3 IYROSINE-PROTEIN 3 IYROSINE-PROTEIN 4 IYROSINE-PROTEIN 6 IYROSINE-PROTEIN 6 IYROSINE-PROTEIN 6 IYROSINE-PROTEIN 6 IYROSINE-PROTEIN 6 IYROSINE-PROTEIN 6 IYROSINE-PROTEIN 6 IYROSINE-PROTEIN 6 IYROSINE-PROTEIN 6 IYROSINE-PROTEIN 6 IYROSINE-PROTEIN 7 IYROSINE-PROT		] ]	M86400						П	
activation protein, zeta   polypeptide   (   YWHAZ)	In 5-monooxygenase	[			1 .				ĺ	
YWHAZ    Yorkina   Yorki	activation protein, zeta			-				l	١.	
Igrosine 3-	polypeptide (	,						1	İ	
monoxygenase atriyptopha   n 5-monoxygenase activation protein, zeta   polypeptide (YWHAZ)   TYROSINE-PROTEIN   Z		1	M86400	<del></del>	+		-	-	├—	
activation profein, zeta   polypeptide (YVVHAZ)     TyROSINE-PROTEIN   2   P43403     KINASE ZAP-70 (70 KD   ZETA-ASSOCIATED   PROTEIN (SYK-RELATED TYROSINE KINASE   TYROSI	monooxygenase/tryptopha					•		ľ	l	
Tyrcosine kinase 2 (TYR2)	activation protein, zeta							l		
TYROSINE-PROTEIN	polypeptide (YWHAZ)	<u> </u>						ŀ		
KINASE ZAP-70 (70 KD   ZETA-ASSOCIATED   PROTEIN) (SYK-RELATED   TYROSINE KINASE)   U89436					+	+	+		+	
ZETA-ASSOCIATED   PROTEIN (SYK-RELATED TYROSINE KINASE)	TYROSINE-PROTEIN	2	P43403	1	1				$\vdash$	
PROTEIN (SYK.RELATED TYROSINE KINASE)  tyrcsyl-IRNA synthetase	ZETA-ASSOCIATED			1.				l		
Image: Transmit   Image: Tra	PROTEIN) (SYK-RELATED			(3)						
U1 smáll nuclear RNA	tyrosyl-tRNA synthetase	1	U89436	+ -	+	+	+	-	+	
U19H snoRNA (=M63485 R.norvegicus matrin 3) U2(RNU2) small nuclear RNA auxiliary factor 1 (non-standard symbol) (U2AF1) U22 snoRNA host gene (UHG) U22 snoRNA host gene (UHG) U39 small nuclear RNA splicing factor (HPRP3P) U49 small nuclear RNA splicing factor (HPRP3P) U49 small nuclear RNA 1 X96649 U5 snRNP-specific protein (220 kD), ortholog of S. cerevisiae Prp8p (PRP8) U5 snRNP-specific protein, 116 kD (U5-116KD) U5 snRNP-specific protein, 200 kDa (DEXH RNA helicase family) (U5-200-KD) U58880 mRNA for ubiquitin U5 snRNP-specific protein, 27000 CDa (DEXH RNA helicase (6.4kD) subunit (UQCR) UBIQUINOL- CYTOCHROME C REDUCTASE IRON- SULFUR SUBUNIT PRECURSOR (RIESKE IRON- SULFUR SUBUNIT PRECURSOR (RIESKE IRON- SULFUR SUBUNIT PRECURSOR (RIESKE IRON- SULFUR SUBUNIT PRECURSOR (RIESKE IRON- SULFUR SUBUNIT) (RISP) (low match) ubiquitin A-52 residue 2 X56999							<u> </u>			
R.norvegicus matrin 3   U2(RNU2) small nuclear   RNA auxillary factor 1   (non-standard symbol) (U2AF1)   U22 snoRNA host gene (UHG)   U4/U5-associated RNA   AF016370   + + + + + + + + + + + + + + + + + +										
DZ(RNUZ) small nuclear RNA auxillary factor 1 (non-standard symbol) (UZAF1)   UZZ snoRNA host gene (UHG)   UZAJE1)   UZZ snoRNA host gene (UHG)   UZAJE1   UZZ snoRNA host gene (UHG)   UZAJE1   UZZ snoRNA   UZZ snoRNA   UZZ snoRNA   UZZ snoRNA   UZZ snoRNA   UZZ snoRNA   UZZ snoRNA   UZZ snoRNA   UZZ snoRNA   UZZ snoRNA   UZZ snoRNA   UZZ snoRNA   UZZ snoRNA   UZZ snoRNP-specific protein   UZ	R norvegicus matrin 3)	1	AJ224166.							
RNA auxillary factor 1	U2(RNU2) small nuclear	1	M96982		+	+	-	-	-	
(U2AF1)	RNA auxillary factor 1	·			1	•	'	•	l `	
U4/U6-associated RNA   Splicing factor (HPRP3P)   U49 small nuclear RNA   1   X96649   U5 snRNP-specific protein (220 kD), ortholog of S. cerevisiae Pm8p (PRP8)   U5 snRNP-specific protein, 20 kDa (DEXH RNA helicase family) (U5-200-KD)   U5 snRNAP-specific protein, 200 kDa (DEXH RNA helicase family) (U5-200-KD)   U5 snRNAP-specific protein, 200 kDa (DEXH RNA helicase family) (U5-200-KD)   U5-200-KD)   U5-200-KD)   U5-200-KD   U5-200	(U2AF1)			· .					l .	
Isplicing factor (HPRP3P) U49 small nuclear RNA 1 X96649 U5 snRNP-specific protein (220 kD), ortholog of S, cerevisiae Prp8p (PRP8) U5 snRNP-specific protein; 4 D21163 + + + + + + + + + + + + + + + + + + +	U22 snoRNA host gene (UHG)	2	U40580						-	
Isplicing factor (HPRP3P) U49 small nuclear RNA 1 X96649 U5 snRNP-specific protein (220 kD), ortholog of S, cerevisiae Prp8p (PRP8) U5 snRNP-specific protein, 116 kD (U5-116KD) U5 snRNP-specific protein, 200 kDa (DEXH RNA helicase family) (U5-200-kD) Uba80 mRNA for ubiquitin 4 S79522 + + + + + high in ovary Ubiquinol-cytochrome c reductase (6.4kD) subunit (UQCR) UBIQUINOL- CYTOCHROME C REDUCTASE IRON- SULFUR SUBUNIT PRECURSOR (RIESKE IRON-SULFUR PROTEIN) (RISP) (low match) Ubiquitin A-52 residue ribosomal protein fusion	U4/U6-associated RNA	4	AF016370		++	+	+			
U5 snRNP-specific protein (220 kD), ortholog of S. cerevisiae Prp8p (PRP8) U5 snRNP-specific protein: 4 D21163 + + + + + + + + + + + + + + + + + + +	Isplicing factor (HPRP3P)			*		•	'			
(220 kD), ortholog of S. cerevisiae Prp8p (PRP8) U5 snRNP-specific protein; 116 kD (U5-116KD) U5 snRNP-specific protein, 200 kDa (DEXH RNA) helicase family) (U5-200- KD) Uba80 mRNA for ubiquitin 4 S79522 + + + + + + high in ovary ubiquinol-cytochrome c reductase (6.4kD) subunit (UQCR) UBIQUINOL- CYTOCHROME C REDUCTASE IRON- SULFUR SUBUNIT PRECURSOR (RIESKE IRON-SULFUR PROTEIN) (RISP) (low match) ubiquitin A-52 residue ribosomal protein fusion		1	X96649			1				
Cerevisiae Prp8p (PRP8)   U5 snRNP-specific protein;   4	U5 snRNP-specific protein	1	AB007510	+	+	+	+	_	+	
116 kD (U5-116KD)   U5 snRNP-specific protein,   200 kDa (DEXH RNA helicase family) (U5-200-KD)   U5880 mRNA for ubiquitin   4   S79522   +	(PRP8)					•				
U5 snRNP-specific protein, 200 kDa (DEXH RNA helicase family) (U5-200- KD) Uba80 mRNA for ubiquitin 4 S79522 + + + + + + high in ovary ubiquinol-cytochrome c reductase (6.4kD) subunit (UQCR) UBIQUINOL- 1 P47985 CYTOCHROME C REDUCTASE IRON-SULFUR SUBUNIT PRECURSOR (RIESKE IRON-SULFUR PROTEIN) (RISP) (low match) Ubiquitin A-52 residue 2 X56999 ribosomal protein fusion	1116 kD (U5-116KD)	4	D21163	+	+	+	+		+	
helicase family) (U5-200-KD)  Uba80 mRNA for ubiquitin 4 S79522 + + + + + + + high in ovary  ubiquinol-cytochrome c reductase (6.4kD) subunit (UQCR)  UBIQUINOL- 1 P47985  CYTOCHROME C REDUCTASE IRON-SULFUR SUBUNIT PRECURSOR (RIESKE IRON-SULFUR PROTEIN) (RISP) (low match)  ubiquitin A-52 residue 2 X56999 ribosomal protein fusion	U5 snRNP-specific protein	3	Z70200	<del></del>	† • †				_	
KD     Uba80 mRNA for ubiquitin   4   S79522	helicase family (15-200								•	
ubiquinol-cytochrome c reductase (6.4kD) subunit (UQCR) UBIQUINOL- CYTOCHROME C REDUCTASE IRON- SULFUR SUBUNIT PRECURSOR (RIESKE IRON-SULFUR PROTEIN) (RISP) (low match) ubiquitin A-52 residue ribosomal protein fusion	(KD)									
ubiquinol-cytochrome c reductase (6.4kD) subunit (UQCR)  UBIQUINOL- CYTOCHROME C REDUCTASE IRON- SULFUR SUBUNIT PRECURSOR (RIESKE IRON-SULFUR PROTEIN) (RISP) (low match) ubiquitin A-52 residue ribosomal protein fusion	Uba80 mRNA for ubiquitin	4	S79522	+	+ +	+	+	+	+	high in ovary
reductase (6.4kD) subunit (UQCR)  UBIQUINOL- CYTOCHROME C REDUCTASE IRON- SULFUR SUBUNIT PRECURSOR (RIESKE IRON-SULFUR PROTEIN) (RISP) (low match) Ubiquitin A-52 residue 2 X56999 ribosomal protein fusion	ubiquinol-cytochrome c	1		+	+++					, , ,
UBIQUÍNOL- CYTOCHROME C REDUCTASE IRON- SULFUR SUBUNIT PRECURSOR (RIESKE IRON-SULFUR PROTEIN) (RISP) (low match) Ubiquitin A-52 residue ribosomai protein fusion	reductase (6.4kD) subunit					•		·		ao.co iwily
CYTOCHROME C REDUCTASE IRON- SULFUR SUBUNIT PRECURSOR (RIESKE IRON-SULFUR PROTEIN) (RISP) (low match) ubiquitin A-52 residue ribosomal protein fusion			P47085				$\Box$			•
SULFUR SUBUNIT PRECURSOR (RIESKE IRON-SULFUR PROTEIN) (RISP) (low match) Ubiquitin A-52 residue 2 X56999 ribosomal protein fusion	CYTOCHROME C		11000	. •			.			
PRECURSOR (RIESKE IRON-SULFUR PROTEIN) (RISP) (low match) Ubiquitin A-52 residue 2 X56999 ribosomal protein fusion			e **					. [		
IRON-SULFUR PROTEIN) (RISP) (low match)  ubiquitin A-52 residue 2 X56999 ribosomal protein fusion	PRECURSOR (RIESKE			-	[ ]					
(RISP) (low match)  ubiquitin A-52 residue 2 X56999  ribosomal protein fusion	IRON-SULFUR PROTEIN)	.			.	į	·	٠.]		.
ribosomal protein fusion	(RISP) (low match)							.		· .
procedural process TUSION	ubiquitin A-52 residue	2	X56999			$\neg$				
	product 1 (UBA52)					.				·
ubiquitin activating enzyme 1 AF094516 + +	ubiquitin activating enzyme		AF094516		┝┯┥	<u>.                                    </u>			_	
E1-like protein (GSA7)	E1-like protein (GSA7)		007010			* .			7	
ubiquitin C (UBC) 5 AB009010 + + + + + high in ovary	ubiquitin C (UBC)	5	AB009010		+	+	+	+	+	high in overy

· <del></del>									•
ubiquitin carboxyl-terminal esterase L3 (ubiquitin thiolesterase) (UCHL3)	1	M30496	+	+	+	+	T -	+	
ubiquitin fusion degradation 1-like (UFD1L)	1	U64444	+	+	+	+		+	
ubiquitin protein ligase E3A (human papilloma virus E6-	1	U84404	В.	+	+	1.		+	
associated protein, Angelman syndrome)					·				
(UBE3A) ubiquilin specific protease 10 (USP10)	4	D80012	+	+	+	+		+	
ubiquitin specific protease	1	U44839	+	+:	+	+	+	+	
ubiquitin specific protease 15 (USP15)	3	AB011101	+	+	+	+		+	
ubiquitin specific protease 19 (USP19)	1	AB020698		+	<u> </u>		-	-	
ubiquitin specific protease 4 (proto-oncogene) (USP4)	1.	AF017305	В	+	+	_	+	+	
ubiquitin specific protease 4 (proto-oncogene) (USP4) (non-exact, 66%)	1	AF017306							
ubiquitin specific protease 7 (herpes virus-associated) (USP7)		Z72499 ·		+	+	+		+	
ubiquitin specific protease 8 (USP8)	5.	D29956		+	+	+		+	
UBIQUITIN-ACTIVATING ENZYME E1 (A1S9	. 1	P22314							
PROTEIN) (56%)  ubiquitin-activating enzyme E1 (A1S9T and BN75	1	M58028	+	+	+	+	-	+	·
temperature sensitivity complementing) (UBE1)									:
ubiquitin-activating enzyme E1, like (UBE1L)	1	L34170	+ .	+		+		+	
UBIQUITIN-BINDING PROTEIN P62:	1	U41806			+		+		
phosphotyrosine independent ligand for the Lck SH2 domain p62 (P62)									
ubiquitin-conjugating enzyme E2 variant 1	2	U49278	+	+	+	+	+	+	
(UBE2V1) ubiquitin-conjugating enzyme E2 variant 2	1	X98091			0				
(UBE2V2) UBIQUITIN-	1	Q16781							
CONJUGATING ENZYME E2-17 KD (UBIQUITIN- PROTEIN LIGASE)		4.0.0.							
ubiquitin-conjugating enzyme E2B (RAD6 homolog) (UBE2B)	1 .	M74525	+	+	+	+		+	
ubiquitin-conjugating enzyme E2G 2	1	AF0324 <b>5</b> 6	+	+	+	+		+	
(homologous to yeast UBC7) (UBE2G2)	-								*
ubiquitin-conjugating enzyme E2H (homologous to yeast UBC8) (UBE2H)	•	Z29328	+	+	+	+		+	*
ubiquitin-conjugating enzyme E2L 1 (UBE2L1)	1	X92962		+	+		_	+	
ubiquitin-conjugating enzyme E2L 3 (UBE2L3)	3	AJ000519		+	+	+		+	
ubiquitin-conjugating enzyme E2L 6 (UBE2L6)	4	AF031141		+	+	+	+	+	
ubiquitin-like 1 (sentrin) (UBL1)	2	U61397	+	+	+	+		+	

		•						_	CITCAUUTUUUU
UDP-N-acetyl-alpha-D- galactosamine:polypeptide N-	2	X85019							
acetylgalactosaminyltransf erase 2 (GalNAc-T2) (GALNT2)									
UDP-N-acetyl-alpha-D-	1-1-	X92689	<u> </u>	<del> </del>		<u> </u>	<u> </u>	_	
galactosamine:polypeptide									
acetylgalactosaminyltransf erase 3				1					
(GalNAc-T3) (GALNT3) (non-exact-65%)			<u>.</u>			·			
unactive progesterone receptor, 23 Kd (P23)	2	L24804		+	+	+		+	
unconventional myosin-ID (MYO1F)	3	U57053			÷				
uncoupling protein homolog (UCPH)	1	U94592							
uncoupling protein homolog (UCPH) (low match 67%)	1	U94592		·			,		
Unknown gene product	1	AC002310				-	_		
unknown mRNA (clone 24514)	1	AF070542							
unknown protein (clone ICRFp507L0677)	2	Z70223							
unknown protein (Hs.93832)	1	AF070626	. +	+.	+	+	+	+	
unknown protein IT14	1	AF040966			-			-	
uppressor of Ty (S.cerevisiae) 6 homolog	1	D79984	+	+	+	+	+	+	
upregulated by 1,25- dihydroxyvitamin D-3 (VDUP1)	74	S73591	+	+	+	74-7		+	high in heart
upregulated by 1,25- dihydroxyvitamin D-3 (VDUP1) (low match)	- 1	573591				1		0	
upregulated by 1,25- dihydroxyvitamin D-3 (VDUP1) (low match)	. 1	S73591					-		
upregulated by 1,25- dihydroxyvitamin D-3 (VDUP1) (low score)	<b>1</b>	S73591			• .				
upstream binding factor (hUBF)	1	X53461	+	+		+		+	
UV radiation resistance associated gene (UVRAG)	2	X99050		+	.+	+		+	
vacuolar proton-ATPase, subunit D; V-ATPase, subunit D (ATP6DV)	4	X71490		+	.+	+	+	+	
v-akt murine thymoma viral oncogene homolog 1 (AKT1)	1	M63167	+	+	+	+		+	
Vanin 2 (VNN2)	3	AJ132100		-		$\dashv$	$\dashv$	$\dashv$	
vasodilator-stimulated phosphoprotein (VASP)	3	Z46389	+ .		+	+	$\dashv$	+	
vav 1 oncogene (VAV1)	1	M59834						+	
vav 2 oncogene (VAV2)		S76992	+	+					
v-crk avian sarcoma virus CT10 oncogene homolog (CRK)	1	D10656	W	+	+		+		
v-erb-b2 avian erythroblastic leukemia	1	M29366				7	·	+	
viral oncogene homolog 3 (ERBB3)	·						2		
VERSICAN CORE PROTEIN PRECURSOR	1	P13611				$\dashv$	$\dashv$		
Vesicle-associated membrane protein 1 (synaptobrevin 1) (VAMP1)	.1 <sub>1</sub>	M36196		+	+.	+		+	
(-) Propies in (A MINIE I)									ا ــــــــــــــــــــــــــــــــــــ

									21702100700005
vesicle-associated membrane protein 3 (cellubrevin) (VAMP3)	1	U64520						Π	
v-fos FBJ murine osteosarcoma viral	26	K00650		+	+	+	+	+	high in aorta
oncogene homolog (FOS)	11	VANCEA							
osteosarcoma viral oncogene homolog (FOS) (low match)		K00650							
villin 2 (ezrin) (VIL2)	1	X51521	+	+	+	+	T	+	
villin-like protein	1.	D88154		T .		<del>                                     </del>	1	<del>                                     </del>	
vimentin (VIM)	12	X56134		+	+	+	+	+	high in many libraries
vinculin (VCL)	4	M33308		+	+	+		+	
াধারকার Anderponsive; cytoskeleton related (JWA)	1-1:6	AF070525		+	+	+		+	
v-jun avian sarcoma virus 17 oncogene homolog (JUN)	2	. U65928	+	+-	+	+	1	+	
v-myb avian myeloblastosis viral oncogene homolog (MYB)	1 .	M15024			.+		+.		
voltage-dependent anion channel 1 (VDAC1)	.1	L06132	+ ,	+	.+	+		+	
voltage-dependent anion channel 3 (VDAC3)	4	U90943		+	+	+	<u> </u>	+	
von Hippel-Lindau syndrome (VHL)	1	L15409		+	+	+	Ė	+	·
von Willebrand factor (vWF) (low matched)	1	X06828			-				
v-rat murine sarcoma 3611 viral oncogene homolog 1 (ARAF1)	2	L24038	+	+	+	+			,
v-raf-1 murine leukemia viral oncogene homolog 1	1	X03484	+	+	+	+		+	·
(RAF1) v-ral simian leukemia viral	3	M35416							
oncogene homolog B (ras related; GTP binding protein) (RALB)	•						,		
V-rel avian	1	L19067		+	+	+	Н	+	· · · · · · · · · · · · · · · · · · ·
reticuloendotheliosis viral oncogene homolog A (nuclear factor of kappa light polypeptide gene enhancer in B-ceils 3	-								
(p65)) (RELA)		- N							
v-yes-1 Yamaguchi sarcoma viral related		M16038	+	+		+		+	
oncogene homolog (LYN) WD repeat domain 1	-1	AB010427	. +	+	+	+	+	+	
(WDR1) WDR1 (=AF020260)	1	AF020056	<u></u>	$\vdash \dashv$					
WD-repeat protein (HAN11)	2	U94747		+	+	$\dashv$		+	·
Williams-Beuren syndrome chromosome region 1 (WBSCR1)	12	AF045555	· <b>+</b>	+	+	+	+	+	
Wiskott-Aldrich syndrome protein interacting protein (WASPIP)	4	X86019	+	+	+			+	
X (inactive)-specific transcript (XIST)	2	M97168			$\dashv$	$\dashv$	-	$\dashv$	
xeroderma pigmentosum, complementation group C (XPC)	3	D21089	+	+	+	+	$\dashv$	$\dashv$	
XIAP associated factor-1	2	X99699	· · · · ·			+	-	-	
XIB	1	X90392		+	+		+	+	
X-linked anhidroitic	1	AF003528					-+	$\dashv$	
ectodermal dysplasia									

X-ray repair	T 4	Nauvag	<del></del>				,		
complementing defective repair in Chinese hamster	· .	M30938	• • -	+.	+.	+		•	high in spleen
cells 5 (double-strand-	<u> </u>					7			· ·
break rejoining; Ku autoantigen,	٠.			i i	٠		ľ		
80kD) (XRCC5)		:							
XRP2 protein	1 .	AJ007590						<del>                                     </del>	
yeloid differentiation primary response gene	1	U84408		+	+	+		+	
(88) (MYD88)	<u>L</u> :	·					·		
zeta-chain (TCR) associated protein kinase	1	L05148	+			+	1		<u> </u>
(70kD) (ZAP70)			İ						
zeta-chain (TCR) associated protein kinase	1.	L05148						1	
(70kD) (ZAP70) (low match)							·		
zinc finger protein (Hs.47371)	2	U69274	+	+	+	+		+	
zinc finger protein (Hs.78765)	1	U69645	+	+	+.	+		+	
zinc finger protein 10 (KOX	. 1	X78933		_		$\vdash$	-	-	+ only
1) (ZNF10) ZINC FINGER PROTEIN	1	Q15973				<u> </u>	_	<u> </u>	,
124 (HZF-16) (non-exact 51%)	'	Q10973							
zinc finger protein 124 (HZF-16) (ZNF124) (non-	1	S54641						Г	
exact, 78%)							- 1-		
ZINC FINGER PROTEIN 133		P52736							
zinc tinger protein 136 (clone pHZ-20) (ZNF136)	1	U09367			+	+	[	·	- 1
zinc finger protein 140 (clone pHZ-39) (ZNF140)	1	. U09368		+		+		+	
zinc finger protein 140	1	AF060865	·	-	•		$\vdash$	-	
(clone pHZ-39) (ZNF140) (non-exact 59%)									
zinc finger protein 140 (clone pHZ-39) (ZNF140) (non-exact 73%)	1	U09368	÷	·					
zinc finger protein 140 (clone pHZ-39) (ZNF140)		S66508							
(non-exact 73%aa)									3
zinc finger protein 140 (clone pHZ-39) (ZNF140)	1	009368							
(non-exact, 80%)									n( )
zinc finger protein 143 (clone pHZ-1) (ZNF143)	2	U09850	<b>+</b>	+	+	+	+	+	
zinc finger protein 143 (clone pHZ-1) (ZNF143)	1.	U09850		-			_		
(low match)			ĺ						
zinc finger protein 148 (pHZ-52) (ZNF148)	1	AF039019	· +						
ZINC FINGER PROTEIN	1	Q13105					_	$\vdash$	
151 (MIZ-1 PROTEIN) (low match)			·			•			
zinc finger protein 173 (ZNF173)	1	U09825	B, T	+	+ ·		+		·
zinc finger protein 192 (ZNF192) (non-exact, 66%)	1	U57798				•			
zinc finger protein 198 (ZNF198)	1	AJ224901		+	+	+	•		· · · · · · · · · · · · · · · · · · ·
zinc finger protein 2 (ZNF2) (low match)	1	X60152				$\dashv$			
zinc finger protein 200 (ZNF200)	1	AF060866		+	·	Ŧ			
zinc finger protein 207 (ZNF207)	6	AF046001	+	+	+	+	+	+	high in prostate
zinc finger protein 216 (ZNF216)	2	AF062072	+	+	+	+	_	+	
(CIT 2 10)									L

zinc finger protein 217	1	AF041259	Tacti	vated		T	T.	+	T : ':
(ZNF217) ZINC FINGER PROTEIN	-	P17026	<del></del>			-	_	ļ.,	
22 (ZINC FINGER		1 17020							
PROTEIN KOX15) (non- exact 58%)		·							
zinc finger protein 230	1	U95044	<del> </del>	+	<u> </u>	+-		1	
(ZNF230) Zinc finger protein 239	1-1-	L26914		+	-	+	<u> </u>	ــــ	
(ANF239)	<u> </u>					Ŀ			
zinc finger protein 261 (ZNF261)	1	AB002383		+	+	+		+	
zinc finger protein 262 (ANF262)	1	AB007885	† — — — — — — — — — — — — — — — — — — —	+	+	+	T	+	
zinc finger protein 263 (ZNF263)	7	- D88827		+	-	-	$\vdash$	-	· · · · · · · · · · · · · · · · · · ·
zinc finger protein 264	1	AB007872	<del>-</del>	+	+	+	-	<del>  -</del>	<u> </u>
(ZNF264) ZINC FINGER PROTEIN	1	Q06730	ļ	<u> </u>		ļ	<u> </u>	_	
33A (ZINC FINGER	'	400750						ł	
PROTEIN KOX31) (KIAA0065) (HA0946)				1	1				
zinc finger protein 42	1	M58297	+	+	+	+	<del>                                     </del>	+	
(myeloid-specific retinoic cid- responsive) (ZNF42)								1	
zinc finger protein 43 (HTF6) (ZNF43) (low	1	X59244	T .	<b>†</b>		<b> </b>	1	<u> </u>	
match)				1	<u> </u>				
zinc finger protein 43 (HTF6) (ZNF43) (non-	1	X59244						•	
exact, 54%)									
zinc finger protein 43 (HTF6) (ZNF43) (non-	. 1	X59244							
exact, 71%)									,
ZINC FINGER PROTEIN 43 (ZINC PROTEIN HTF6)	1	. P28160							
I(non-exact 67%)		· .	•			Ŀ	ŀ		
zinc finger protein 45 (a Kruppel-associated box	1	L75847							only found in testis
(KRAB) domain polypeptide) (ZNF45)	ŀ				١.				
ZINC FINGER PROTEIN	1	P24278	<del> </del>		├			_	
46 (ZINC FINGER PROTEIN KUP) (non-exact									
62%)	L			·					
zinc finger protein 6 (CMPX1) (ZNF6)	-1	X56465	·	+	+	+		+	
zinc finger protein 74	1	X71623	<del></del>						
(Cos52) (ZNF74) (non- exact, 67%)		~		·					
zinc finger protein 76 (expressed in testis)	1	M91592		+	+ .	+		+	
(ZNF76)	0.0								
ZINC FINGER PROTEIN 83 (ZINC FINGER	1	P51522							(3)
PROTEIN HPF1) (non-		*							
exact 65%) zinc finger protein 84	1	M27878	Tactivated	+	+			+	
(HPF2) (ZNF84) zinc finger protein 85									·
(ZNF85))	2	U35376		+	+	+			
zinc finger protein 9 (ZNF9)	5	M28372		+	+	+	+	+	
ZINC FINGER PROTEIN 93 (=ZINC FINGER	1	P35789							
PROTEIN HTF34) (non- exact 70%)	•		.						
zinc finger protein C2H2-25	3	U38904		+	+	+			
(ZNF25) zinc tinger protein clone	1	AF024706							
L3-4 zinc finger protein									
homologous to Zfp-36 in	4	M92843	+	•					blood only
mouse (ZFP36)						<u> </u>			

ZINC FINGER PROTEIN	T-1	Q03164	T			·			· · · · · · · · · · · · · · · · · · ·	<del></del>
HRX (ALL-1) (71%a.a.)	'			1 .					٠,	•
zinc finger protein HZF4	1	X78927				T-				
zinc finger protein RIZ	1.	D45132	+	+	. +	+		+		-
zinc finger protein, subfamily 1A, 1 (Ikaros) (LYF1)	1	U40462	+	1						
zinc finger protein, subfamily 1A, 1 (Ikaros) (LYF1) (low match)	1	U40462								
zinc finger transcriptional regulator (GOS24)	1	M92844					-			· · · · · · · · · · · · · · · · · · ·
zinc-finger helicase (hZFH)	2	U91543	+	+	+	+		+		
Zn-15 related zinc finger protein (rtf)	1	U22377		+	+	+				
Zn-15 related zinc finger protein (rlf) (non-exact 56%)	. 1	U22377						·		
ZNF80-linked ERV9 long terminal repeat	• 1	X83497			٠.		7			
ZW10 (Drosophila) homolog, centromere/kinetochore protein (ZW10)	2 .	U54996		+						· · ·
zyxin (ZYX)	4	· X95735								

Column 1: List of unique genes derived from 6,283 known ESTs from blood cells.

Column 2: Number of genes found in randomly sequenced ESTs from blood cells.

Column 3: Accession number. Column 4: "+" indicates the presence of the unique gene in publicly available cDNA libraries of blood (Bl), brain (Br), heart (H), kidney (K), liver (Li) and lung (Lu). \*\*Comparison to previously identified tissue-specific genes was determined using the GenBank of the National Centre of Biotechnology Information (NCBI) Database.

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### **Discussion**

Every cell and tissue comprising the human body share the necessary genetic information required to maintain cellular homeostasis. These "housekeeping" genes function in basic cellular maintenance, including energy metabolism and cellular structure in all cell types. However, in certain situations, even the housekeeping genes show altered expression. Thus, it is necessary to define the use of these genes as internal controls from one investigation to another. Current results from the human blood cell EST database indicate that over 50% of the transcripts are

widely expressed throughout the human body. Most of the cell or tissue specific genes are also detectable in blood cells by RT-PCR analysis.

For example, isoformic myosin heavy chain genes are known to be generally expressed in cardiac muscle tissue. In the rodent, the βMyHC gene is only highly expressed in the fetus and in diseased states such as overt cardiac hypertrophy, heart failure and diabetes; the αMyHC gene is highly expressed shortly after birth and continues to be expressed in the adult heart. In the human, however, βMyHC is highly expressed in the ventricles from the fetal stage through adulthood. This highly expressed βMyHC, which harbours several mutations, has been demonstrated to be involved in familial hypertrophic cardiomyopathy (Geisterfer-Lowrance *et al.* 1990). It was reported that mutations of βMyHC can be detected by PCR using blood lymphocyte DNA (Ferrie et al., 1992). Most recently, it was also demonstrated that mutations of the myosin-binding protein C in familial hypertrophic cardiomyopathy can be detected in the DNA extracted from lymphocytes (Niimura *et al.*, 1998).

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Similarly, APP and APC, which are known to be tissue specific and predominantly expressed in the brain and intestinal tract, are also detectable in the transcripts of blood. These cell- or tissue-specific transcripts are not detectable by Northern blot analysis. However, the low number of transcript copies can be detected by RT-PCR analysis. These findings strongly demonstrate that genes preferentially expressed in specific tissues can be detected by a highly sensitive RT-PCR assay. In recent years, evidence has been obtained to indicate that expression of cell or tissue-restricted genes can be detected in the peripheral blood of patients with metastatic transitional cell carcinoma (Yuasa et al. 1998) and patients with prostate cancer (Gala et al. 1998).

Atrial natriuretic factor (ANF) and zinc finger protein (ZFP), which are known to be highly expressed in heart tissue biopsies and in the plasma of heart failure patients, are also detectable in the transcripts of blood. Differential expression of zinc finger protein among the normal, diabetic and asymptomatic preclinical

subjects may have additional value as a prophylactic "early warning system". On a related note, there is now more attention/discussion in the cardiovascular disease field being focused on Syndrome X, loosely defined as a continuum of hypertension, increasing sugar levels, diabetes, kidney failure, culminating in heart failure, with the possibility of stroke and heart attack at any time in the continuum. The early identification of patients at risk of organ failure has been a challenge to the medical community for some time and the present method has the potential of resolving or, at least, ameliorating this challenge.

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The present invention demonstrates that a simple drop of blood may be used to determine the quantitative expression of various mRNAs that reflect the health/disease state of the subject through the use of RT-PCR analysis. This entire process takes about three hours or less. The single drop of blood may also be used for multiple RT-PCR analyses. There is no need for large samples and/or costly and time-consuming separation of cell types within the blood for this method as compared to the methods described by Kimoto (1998) and Chelly et al. (1989; 1988). It is believed that the present finding can potentially revolutionize the way that diseases are detected, diagnosed and monitored because it provides a non-invasive, simple, highly sensitive and quick screening for tissue-specific transcripts. The transcripts detected in whole blood have potential as prognostic or diagnostic markers of disease, as they reflect disturbances in homeostasis in the human body. Delineation of the sequences and/or quantitation of the expression levels of these marker genes by RT-PCR will allow for an immediate and accurate diagnostic/prognostic test for disease or to assess the efficacy and monitor a particular therapeutic.

In addition to RT-PCR, other methods of amplifying may also be used for the purpose of measuring/quantitating tissue-specific transcripts in human blood. For example, mass spectrometry may be used to quantify the transcripts (Koster et al., 1996; Fu et al., 1998). The application of presently disclosed method for detecting tissue-specific transcripts in blood does not restrict to subjects undergoing course of

therapy or treatment, it may also be used for monitoring a patient for the onset of overt symptoms of a disease. Furthermore, the present method may be used for detecting any gene transcripts in blood. A kit for diagnosing, prognosing or even predicting a disease may be designed using gene-specific primers or probes derived from a whole blood sample for a specific disease and applied directly to a drop of blood. A cDNA library specific for a disease may be generated from whole blood samples and used for diagnosis, prognosis or even predicting a disease.

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Any patents or publications mentioned in this specification are indicative of the levels of those skilled in the art to which the invention pertains. Further, these patents and publications are incorporated by reference herein in their entirety to the same extent as if each individual publication was specifically and individually indicated to be incorporated by reference.

One skilled in the art will appreciate readily that the present invention is well adapted to carry out the objects and obtain the ends and advantages mentioned, as well as those objects, ends and advantages inherent herein. The present examples, along with the methods, procedures, treatments, molecules, and specific compounds described herein are presently representative of preferred embodiments, are exemplary, and are not intended as limitations on the scope of the invention. Changes therein and other uses will occur to those skilled in the art which are encompassed 15 within the spirit of the invention as defined by the scope of the claims.

- 1. A method for detecting expression of a gene in blood from a subject, comprising the steps of:
  - a) quantifying RNA from a subject blood sample; and
- b) detecting expression of said gene in the quantified RNA, wherein the expression of said gene in said quantified RNA indicates expression of said gene in the subject blood.
- 10 2. The method of claim 1, wherein the quantification is performed by mass spectrometry.
  - 3. A method for detecting expression of one or more genes in blood from a subject, comprising the steps of:

- a) obtaining a subject blood sample;
- b) extracting RNA from said blood sample;
- c) amplifying said RNA;
- d) generating expressed sequence tags from the amplified RNA product; and
- e) detecting expression of said genes in the expressed sequence tags, wherein the expression of said genes in said expressed sequence tags indicates expression of said genes in the subject blood.
  - 4. The method of claim 3, wherein said genes are non-cancer-associated genes.
    - 5. The method of claim 3, wherein said genes are tissue-specific genes.

- 6. The method of claim 3, wherein said subject is a fetus, an embryo, a child, an adult or a non-human animal.
- 7. The method of claim 3, wherein the amplification is performed by RT-PCR.
- 8. The method of claim 7, wherein said RT-PCR utilizes primers selected from the group consisting of random sequence primers and gene-specific primers.
  - 9. A method for detecting expression of one or more genes in blood from a subject, comprising the steps of:
    - a) obtaining a subject blood sample;

b) extracting DNA fragment(s) from

- b) extracting DNA fragment(s) from said blood sample;
- c) amplifying said DNA fragment(s); and
- d) detecting expression of said genes in the amplified DNA product, wherein the expression of said genes in said amplified DNA product indicates expression of said genes in the subject blood.

20

- 10. A method for monitoring a course of therapeutic treatment in an individual, comprising the steps of:
  - a) obtaining a blood sample from said individual;
  - b) extracting RNA from said blood sample;
  - c) amplifying said RNA;
- d) generating expressed sequence tags from the amplified RNA product; and

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- e) detecting expression of genes in said expressed sequence tags, wherein the expression of said genes is associated with the effect of said therapeutic treatment; and
- f) repeating steps a)-e), wherein the course of said therapeutic treatment is monitored by detecting the change of expression of said genes in the expressed sequence tags.
  - 11. The method of claim 10, wherein the amplification is performed by RT-PCR.

- 12. The method of claim 11, wherein the change of expression of said genes in the expressed sequence tags is monitored by sequencing the expressed sequence tags and comparing the resulting sequences at various time points.
- 13. The method of claim 11, wherein the change of expression of said genes in the expressed sequence tags is monitored by performing single nucleotide polymorphism analysis and detecting the variation of a single nucleotide in the expressed sequence tags at various time points.
- 20 14. The method of claim 10, wherein said individual is monitored for the onset of overt symptoms of a disease, and wherein the expression of said genes is associated with the onset of said symptoms.
- 15. A method for diagnosing a disease in a test subject, comprising 25 the steps of:
  - a) generating a cDNA library for said disease from a whole blood sample from a normal subject;

b) generating expressed sequence tag (EST) profile from the normal subject cDNA library;

- c) generating a cDNA library for said disease from a whole blood sample from a test subject;
  - d) generating EST profile from the test subject cDNA library; and
- e) comparing the test subject EST profile to the normal subject EST profile, wherein if said test subject EST profile differs from said normal subject EST profile, said test subject might be diagnosed with said disease.
- 16. A kit for diagnosing, prognosing or predicting a disease, comprising:
  - a) gene-specific primers; wherein said primers are designed in such a way that the sequences of said primers contain the opposing ends of two adjacent exons for the specific gene with the intron sequence excluded; and
- b) a carrier, wherein said carrier immobilizes said primer(s).
  - 17. The kit of claim 16, wherein said gene-specific primer(s) are selected from the group consisting of insulin-specific primers, atrial natriuretic factor-specific primers, zinc finger protein gene-specific primers, beta-myosin heavy chain gene-specific primers, amyloid precurser protein gene-specific primers, and adenomatous polyposis-coli protein gene-specific primers.
  - 18. The kit of claim 17, wherein the sequences of said genespecific primers are selected from the group consisting of SEQ ID Nos. 1 and 2, and SEQ ID Nos. 5 and 6.

25

19. A method for diagnosing, prognosing or predicting a disease in a test subject, comprising the step of:

applying the kit of claim 16 to a test subject whole blood sample, wherein quantitative expression levels of specific genes associated with said disease are detected and compared to the levels of said specific genes expressed in a normal subject, therefore, said disease may be diagnosed, prognosed or predicted.

20. The method of claim 19, wherein said method is used for monitoring a course of therapeutic treatment or monitoring the onset of overt symptoms of said disease.

10

21. A kit for diagnosing, prognosing or predicting a disease, comprising:

probes derived from a whole blood sample for a specific a) disease; and

> b) a carrier, wherein said carrier immobilizes said probes.

15

22. A method for diagnosing, prognosing or predicting a disease in a test subject, comprising the step of:

applying the kit of claim 21 to a test subject whole blood sample, wherein quantitative expression levels of specific genes associated with said disease are detected and compared to the levels of said specific genes expressed in a normal subject, therefore, said disease may be diagnosed, prognosed or predicted.

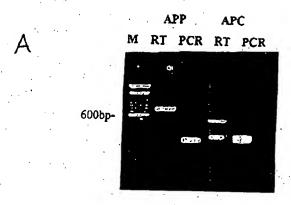
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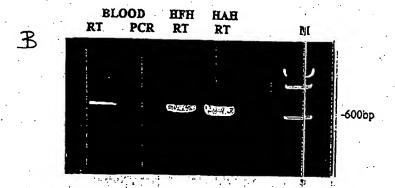
The method of claim 22, wherein said method is used for monitoring a course of therapeutic treatment or monitoring the onset of overt symptoms of said disease.

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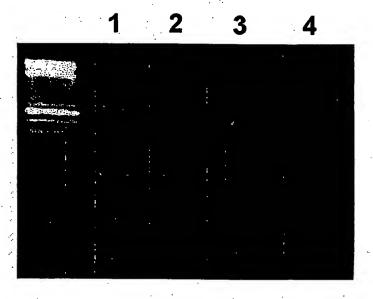
A cDNA library specific for a disease, wherein said cDNA 24. library is generated from whole blood samples.

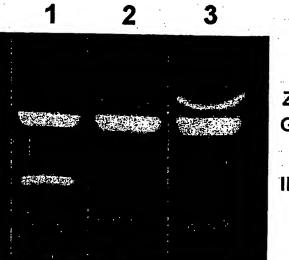
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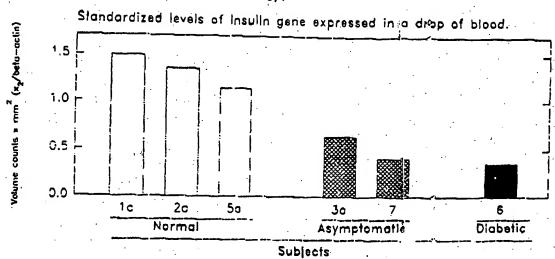


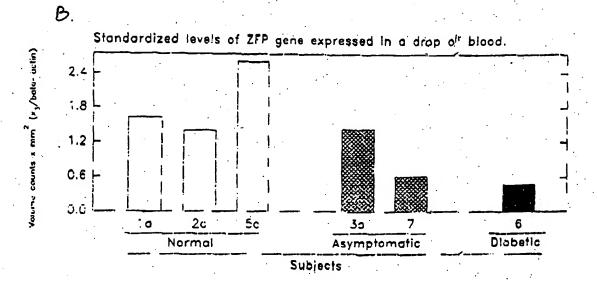
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ZFP GADH INS





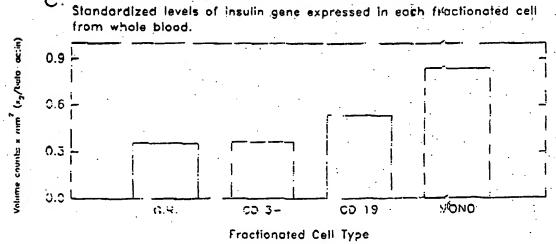


FIGURE 5

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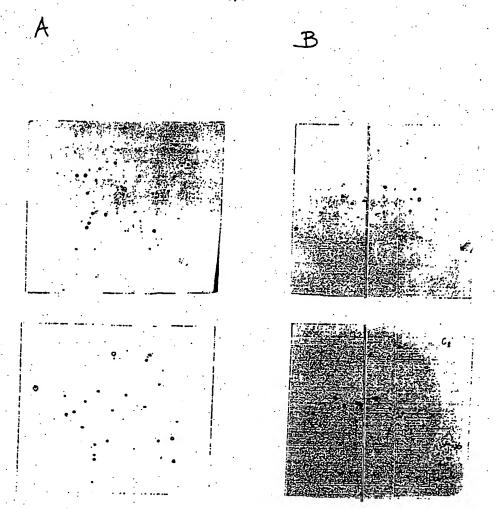
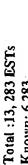


FIGURE 6



Mitochondrial: 405 Known: 6,283

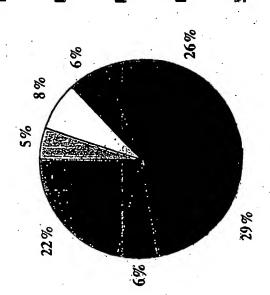
© Cell Division

Ribosome: 498 Repeat: 868

Mis.: 156

Novel: 2,718

### Human Blood



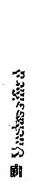
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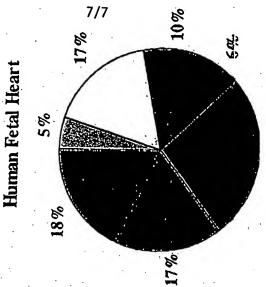
Cell structure/Motility

## ■ Cell/organism defense

## Ce.ne/Protein expression

### Metabolism





27%

cccacctgca ggtcctct

18

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### (19) World Intellectual Property Organization International Bureau





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### PCT

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- (71) Applicant (for all designated States except US): GENE-NEWS INC. [CA/CA]; 45 Bevdale Road, Toronto, Ontario, M2R 1L8 (CA).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): LIEW, Choong-Chin [CA/CA]; 81 Millersgrove Drive, Willowdale, Ontario M2R 3S1 (CA).

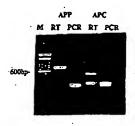
- (74) Agent: DEETH WILLIAMS WALL; National Bank Building, Suite 400, 150 York Street, Toronto, Ontario M5H 3S5 (CA).
- (81) Designated States (national): AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

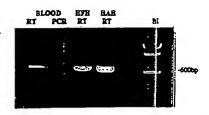
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- with international search report
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[Continued on next page]

### (54) Title: METHOD FOR THE DETECTION OF GENE TRANSCRIPTS IN BLOOD AND USES THEREOF





00/40749 A3

(57) Abstract: The present invention is directed to detection and measurement of gene transcripts in blood. Specifically provided is a RT-PCR analysis performed on a drop of blood for detecting, diagnosing and monitoring diseases using tissue-specific primers. The present invention also describes methods by which delineation of the sequence and/or quantitation of the expression levels of disease-associated genes allows for an immediate and accurate diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen.



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

mai Application No PCT/CA 00/00005

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 C1201/68

According to International Patent Classification (IPC) or to both national classification and IPC

Minimum documentation searched (classification system followed by classification symbols)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, MEDLINE, CHEM ABS Data, BIOSIS, EMBASE, EMBL

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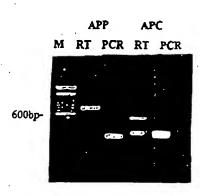
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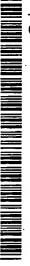
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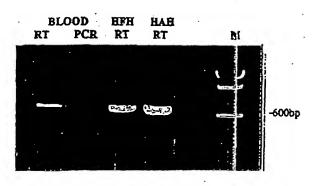
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(54) Title: METHOD FOR THE DETECTION OF GENE TRANSCRIPTS IN BLOOD AND USES THEREOF



(57) Abstract: The present invention is directed to detection and measurement of gene transcripts in blood. Specifically provided is a RT-PCR analysis performed on a drop of blood for detecting, diagnosing and monitoring diseases using tissue-specific primers. The present invention also describes methods by which delineation of the sequence and/or quantitation of the expression levels of disease-associated genes allows for an immediate and accurate diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen.





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### METHOD FOR THE DETECTION OF GENE TRANSCRIPTS IN BLOOD AND USES THEREOF

### BACKGROUND OF THE INVENTION

### Cross-Reference to Related Application

This application claims the benefit of priority of provisional patent application U.S. Serial Number 60/115,125, filed January 6, 1999 and of a U.S. application entitled "Method for the Detection of Gene Transcripts in Blood and uses Thereof" filed on January 4, 2000 (application number not yet assigned).

### Field of the Invention

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The present invention relates generally to the molecular biology of human diseases. More specifically, the present invention relates to a process using the genetic information contained in human peripheral whole blood for the diagnosis, prognosis and monitoring of genetic and infectious disease in the human body.

### Description of the Related Art

The blood is a vital part of the human circulatory system for the human body. Numerous cell types make up the blood tissue including monocytes, leukocytes, lymphocytes and erythrocytes. Although many blood cell types have been described, there are likely many as yet undiscovered cell types in the human blood. Some of these undiscovered cells may exist transiently, such as those derived from tissues and organs that are constantly interacting with the circulating blood in health and disease. Thus, the blood can provide an immediate picture of what is happening in the human body at any given time.

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The turnover of cells in the hematopoietic system is enormous. It was reported that over one trillion cells, including 200 billion erythrocytes and 70 billion neutrophilic leukocytes, turn over each day in the human body (Ogawa 1993). As a consequence of continuous interactions between the blood and the body, genetic changes that occur within the cells or tissues of the body will trigger specific changes in gene expression within blood. It is the goal of the present invention that these genetic alterations be harnessed for diagnostic and prognostic purposes, which may lead to the development of therapeutics for ameliorating disease.

The complete profile of gene expression in the circulating blood remains totally unexplored. It is hypothesized that gene expression in the blood is reflective of body state and, as such, the resultant disruption of homeostasis under conditions of disease can be detected through analysis of transcripts differentially expressed in the blood alone. Thus, the identification of several key transcripts or genetic markers in blood will provide information about the genetic state of the cells, tissues, organs and systems of the human body in health and disease.

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The prior art is deficient in non-invasive methods of screening for tissue-specific diseases. The present invention fulfills this long-standing need and desire in the art.

### SUMMARY OF THE INVENTION.

This present invention discloses a process of using the genetic information contained in human peripheral whole blood in the diagnosis, prognosis and monitoring of genetic and infectious disease in the human body. The process described herein requires a simple blood sample and is, therefore, non-invasive compared to conventional practices used to detect tissue specific disease, such as biopsies.

One object of the present invention is to provide a non-invasive method for the diagnosis, prognosis and monitoring of genetic and infectious disease in humans and animals.

In one embodiment of the present invention, there is provided a method for detecting expression of a gene in blood from a subject, comprising the steps of: a) quantifying RNA from a subject blood sample; and b) detecting expression of the gene in the quantified RNA, wherein the expression of the gene in quantified RNA indicates the expression of the gene in the subject blood.

In another embodiment of the present invention, there is provided a method for detecting expression of one or more genes in blood from a subject, comprising the steps of: a) obtaining a subject blood sample; b) extracting RNA from the blood sample; c) amplifying the RNA; d) generating expressed sequence tags (ESTs) from the amplified RNA product; and e) detecting expression of the genes in the ESTs, wherein the expression of the genes in the ESTs indicates the expression of the genes in the subject blood. Preferably, the genes are tissue-specific genes.

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In still another embodiment of the present invention, there is provided a method for detecting expression of one or more genes in blood from a subject, comprising the steps of: a) obtaining a subject blood sample; b) extracting DNA fragments from the blood sample; c) amplifying the DNA fragments; and d) detecting expression of the genes in the amplified DNA product, wherein the expression of the genes in the subject blood.

In yet another embodiment of the present invention, there is provided a method for monitoring a course of a therapeutic treatment in an individual, comprising the steps of: a) obtaining a blood sample from the individual; b) extracting RNA from the blood sample; c) amplifying the RNA; d) generating expressed sequence tags (ESTs) from the amplified RNA product; e) detecting expression of genes in the ESTs, wherein the expression of the genes is associated with the effect of

the therapeutic treatment: and f) repeating steps a)-e), wherein the course of the therapeutic treatment is monitored by detecting the change of expression of the genes in the ESTs. Such a method may also be used for monitoring the onset of overt symptoms of a disease, wherein the expression of the genes is associated with the onset of the symptoms.

In still yet another embodiment of the present invention, there is provided a method for diagnosing a disease in a test subject, comprising the steps of:

a) generating a cDNA library for the disease from a whole blood sample from a normal subject; b) generating expressed sequence tag (EST) profile from the normal subject cDNA library; c) generating a cDNA library for the disease from a whole blood sample from a test subject; d) generating EST profile from the test subject cDNA library; and e) comparing the test subject EST profile to the normal subject EST profile, wherein if the test subject EST profile differs from the normal subject EST profile, the test subject might be diagnosed with the disease.

In still yet another embodiment of the present invention, there is provided a kit for diagnosing, prognosing or predicting a disease, comprising: a) gene-specific primers; wherein the primers are designed in such a way that their sequences contain the opposing ends of two adjacent exons for the specific gene with the intron sequence excluded; and b) a carrier, wherein the carrier immobilizes the primer(s). Such a kit may be applied to a test subject whole blood sample to diagnose, prognose or predict a disease.

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In yet another embodiment of the present invention, there is provided a kit for diagnosing, prognosing or predicting a disease, comprising: a) probes derived from a whole blood sample for a specific disease; and b) a carrier, wherein the carrier immobilizes the probes. Such a kit may be applied to a test subject whole blood sample to diagnose, prognose or predict a disease.

Furthermore, the present invention provides a cDNA library specific for a disease, wherein the cDNA library is generated from whole blood samples.

Other and further aspects, features, and advantages of the present invention will be apparent from the following description of the presently preferred embodiments of the invention. These embodiments are given for the purpose of disclosure.

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### BRIEF DESCRIPTION OF THE DRAWINGS

So that the matter in which the above-recited features, advantages and objects of the invention, as well as others which will become clear, are attained and can be understood in detail, more particular descriptions of the invention briefly summarized above may be had by reference to certain embodiments thereof which are illustrated in the appended drawings. These drawings form a part of the specification. It is to be noted, however, that the appended drawings illustrate preferred embodiments of the invention and therefore are not to be considered limiting in their scope not be considered to limit the scope of the invention.

Figure 1 shows the following RNA samples prepared from human blood; Figure 1A: Lane 1, Molecular weight marker; Lane 2, RT-PCR on APP gene; Lane 3, PCR on APP gene; Lane 4, RT-PCR on APC gene; Lane 5, PCR on APC gene; Figure 1B: Lanes 1 and 2, RT-PCR and PCR of βMyHC, respectively; Lanes 3 and 4, RT-PCR of βMyHC from RNA prepared from human fetal and human adult heart, respectively; Lane 5, Molecular weight marker.

Figure 2 shows quantitative RT-PCR analysis performed on RNA samples extracted from a drop of blood. Forward primer (5'-GCCCTCTGGGGACCTGAC-3', SEQ ID No. 1) of exon 1 and reverse primer (5'-CCCACCTGCAGGTCCTCT-3", SEQ ID No. 2) of exons 1 and 2 of insulin gene. Blood samples of 4 normal subjects were assayed. Lanes 1, 3, 5 and 7 represent overnight "fasting" blood sample and lanes 2, 4, 6 and 8 represent "non-fasting" samples.

Figure 3 shows quantitative RT-PCR analysis performed on RNA samples extracted from a drop of blood. Lanes 1 and 2 represent normal healthy person and lane 3 represents late-onset diabetes (Type II) and lane 4 represents asymptomatic diabetes.

Figure 4 shows multiple RT-PCR assay in a drop of blood. Primers were derived from insulin gene (INS), zinc-finger protein gene (ZFP) and house-keeping gene (GADH). Lane 1 represents normal person. Lane 2 represents lateonset diabetes and lane 3 represents asymptomatic diabetes.

Figure 5 shows standardized levels of insulin gene (Figure 5A) and ZFP gene (Figure 5B) expressed in a drop of blood. The first three subjects were normal, second two subjects showed normal glucose tolerance, and the last subject had late onset diabetes type II. Figure 5C shows standardized levels of insulin gene expressed in each fractionated cell from whole blood.

Figure 6 shows the differential screening of human blood cell cDNA library with different cDNA probes of heart and brain tissue. Figure 6A shows blood cell cDNA probes vs. adult heart cDNA probes. Figure 6B shows blood cell cDNA probes vs. human brain cDNA probes.

Figure 7 graphically shows the 1,800 unique genes in human blood and in the human fetal heart grouped into seven cellular functions.

### DETAILED DESCRIPTION OF THE INVENTION

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In accordance with the present invention, there may be employed conventional molecular biology, microbiology, and recombinant DNA techniques within the skill of the art. Such techniques are explained fully in the literature. See, e.g., Sambrook, Fritsch & Maniatis, "Molecular Cloning: A Laboratory Manual (1982); "DNA Cloning: A Practical Approach," Volumes I and II (D.N. Glover ed. 1985); "Oligonucleotide Synthesis" (M.J. Gait ed. 1984); "Nucleic Acid

Hybridization" [B.D. Hames & S.J. Higgins eds. (1985)]; "Transcription and Translation" [B.D. Hames & S.J. Higgins eds. (1984)]; "Animal Cell Culture" [R.I. Freshney, ed. (1986)]; "Immobilized Cells And Enzymes" [IRL Press, (1986)]; B. Perbal, "A Practical Guide To Molecular Cloning" (1984). Therefore, if appearing herein, the following terms shall have the definitions set out below.

A "cDNA" is defined as copy-DNA or complementary-DNA, and is a product of a reverse transcription reaction from an mRNA transcript. "RT-PCR" refers to reverse transcription polymerase chain reaction and results in production of cDNAs that are complementary to the mRNA template(s).

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The term "oligonucleotide" is defined as a molecule comprised of two or more deoxyribonucleotides, preferably more than three. Its exact size will depend upon many factors which, in turn, depend upon the ultimate function and use of the oligonucleotide. The term "primer" as used herein refers to an oligonucleotide, whether occurring naturally as in a purified restriction digest or produced synthetically, which is capable of acting as a point of initiation of synthesis when placed under conditions in which synthesis of a primer extension product, which is complementary to a nucleic acid strand, is induced, i.e., in the presence of nucleotides and an inducing agent such as a DNA polymerase and at a suitable temperature and pH. The primer may be either single-stranded or double-stranded and must be sufficiently long to prime the synthesis of the desired extension product in the presence of the inducing agent. The exact length of the primer will depend upon many factors, including temperature, source of primer and the method used. For example, for diagnostic applications, depending on the complexity of the target sequence, the oligonucleotide primer typically contains 15-25 or more nucleotides, although it may contain fewer nucleotides. The factors involved in determining the appropriate length of primer are readily known to one of ordinary skill in the art.

As used herein, random sequence primers refer to a composition of primers of random sequence, i.e. not directed towards a specific sequence. These

sequences possess sufficient complementary to hybridize with a polynucleotide and the primer sequence need not reflect the exact sequence of the template.

"Restriction fragment length polymorphism" refers to variations in DNA sequence detected by variations in the length of DNA fragments generated by restriction endonuclease digestion.

A standard Northern blot assay can be used to ascertain the relative amounts of mRNA in a cell or tissue obtained from plant or other tissue, in accordance with conventional Northern hybridization techniques known to those persons of ordinary skill in the art. The Northern blot uses a hybridization probe, e.g. radiolabelled cDNA, either containing the full-length, single stranded DNA or a fragment of that DNA sequence at least 20 (preferably at least 30, more preferably at least 50, and most preferably at least 100 consecutive nucleotides in length). The DNA hybridization probe can be labelled by any of the many different methods known to those skilled in this art. The labels most commonly employed for these studies are radioactive elements, enzymes, chemicals which fluoresce when exposed to untraviolet light, and others. A number of fluorescent materials are known and can be utilized as labels. These include, for example, fluorescein, rhodamine, auramine, Texas Red, AMCA blue and Lucifer Yellow. A particular detecting material is antirabbit antibody prepared in goats and conjugated with fluorescein through an isothiocyanate. Proteins can also be labeled with a radioactive element or with an enzyme. The radioactive label can be detected by any of the currently available counting procedures. The preferred isotope may be selected from <sup>3</sup>H, <sup>14</sup>C, <sup>32</sup>P, <sup>35</sup>S, 36Cl, 51Cr, 57Co, 58Co, 59Fe, 90Y, 125I, 131I, and 186Re. Enzyme labels are likewise useful, and can be detected by any of the presently utilized colorimetric, amperometric spectrophotometric, fluorospectrophotometric, techniques. The enzyme is conjugated to the selected particle by reaction with bridging molecules such as carbodiimides, diisocyanates, glutaraldehyde and the like. Many enzymes which can be used in these procedures are known and can be utilized.

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The preferred are peroxidase,  $\beta$ -glucuronidase,  $\beta$ -D-glucosidase,  $\beta$ -D-galactosidase, urease, glucose oxidase plus peroxidase and alkaline phosphatase. U.S. Patent Nos. 3,654,090, 3,850,752, and 4,016,043 are referred to by way of example for their disclosure of alternate labeling material and methods.

As used herein, "individual" refers to human subjects as well as nonhuman subjects. The examples herein are not meant to limit the methodology of the present invention to human subjects only, as the instant methodology is useful in the fields of veterinary medicine, animal sciences and such.

In one embodiment of the present invention, there is provided a method for detecting expression of a gene in blood from a subject, comprising the steps of: a) quantifying RNA from a subject blood sample; and b) detecting expression of the gene in the quantified RNA, wherein the expression of the gene in quantified RNA indicates the expression of the gene in the subject blood. An example of the quantifying method is by mass spectrometry.

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In another embodiment of the present invention, there is provided a method for detecting expression of one or more genes in blood from a subject, comprising the steps of: a) obtaining a subject blood sample; b) extracting RNA from the blood sample; c) amplifying the RNA; d) generating expressed sequence tags (ESTs) from the amplified RNA product; and e) detecting expression of the genes in the ESTs, wherein the expression of the genes in the ESTs indicates the expression of the genes in the subject blood. Preferably, the subject is a fetus, an embryo, a child, an adult or a non-human animal. The genes are non-cancer-associated and tissue-specific genes. Still preferably, the amplification is performed by RT-PCR using random sequence primers or gene-specific primers.

In still another embodiment of the present invention, there is provided a method for detecting expression of one or more genes in blood from a subject, comprising the steps of: a) obtaining a subject blood sample; b) extracting DNA fragments from the blood sample; c) amplifying the DNA fragments; and d) detecting

expression of the genes in the amplified DNA product, wherein the expression of the genes in the amplified DNA product indicates the expression of the genes in the subject blood.

In yet another embodiment of the present invention, there is provided a method for monitoring a course of a therapeutic treatment in an individual, comprising the steps of: a) obtaining a blood sample from the individual; b) extracting RNA from the thood sample; c) amplifying the RNA; d) generating expressed sequence tags (ESTs) from the amplified RNA product; e) detecting expression of genes in the ESTs, wherein the expression of the genes is associated with the effect of the therapeutic treatment; and f) repeating steps a)-e), wherein the course of the therapeutic treatment is monitored by detecting the change of expression of the genes in the ESTs. Such a method may also be used for monitoring the onset of overt symptoms of a disease, wherein the expression of the genes is associated with the onset of the symptoms. Preferably, the amplification is performed by RT-PCR, and the change of the expression of the genes in the ESTs is monitored by sequencing the ESTs and comparing the resulting sequences at various time points; or by performing single nucleotide polymorphism analysis and detecting the variation of a single nucleotide in the ESTs at various time points.

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In still yet another embodiment of the present invention, there is provided a method for diagnosing a disease in a test subject, comprising the steps of:

a) generating a cDNA library for the disease from a whole blood sample from a normal subject; b) generating expressed sequence tag (EST) profile from the normal subject cDNA library; c) generating a cDNA library for the disease from a whole blood sample from a test subject; d) generating EST profile from the test subject cDNA library; and e) comparing the test subject EST profile to the normal subject EST profile, wherein if the test subject EST profile differs from the normal subject EST profile, the test subject might be diagnosed with the disease.

In still yet another embodiment of the present invention, there is provided a kit for diagnosing, prognosing or predicting a disease, comprising: a) genespecific primers; wherein the primers are designed in such a way that their sequences contain the opposing ends of two adjacent exons for the specific gene with the intron sequence excluded; and b) a carrier, wherein the carrier immobilizes the primer(s). Preferably, the gene-specific primers are selected from the group consisting of insulinspecific primers, atrial natriuretic factor-specific primers, zinc finger protein genespecific primers, beta-myosin heavy chain gene-specific primers, amyloid precurser protein gene-specific primers, and adenomatous polyposis-coli protein gene-specific primers. Further preferably, the gene-specific primers are selected from the group consisting of SEQ ID Nos. 1 and 2; and SEQ ID Nos. 5 and 6. Such a kit may be applied to a test subject whole blood sample to diagnose, prognose or predict a disease by detecting the quantitative expression levels of specific genes associated with the disease in the test subject and then comparing to the levels of same genes expressed in a normal subject. Such a kit may also be used for monitoring a course of therapeutic treatment or monitoring the onset of overt symptoms of a disease.

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In yet another embodiment of the present invention, there is provided a kit for diagnosing, prognosing or predicting a disease, comprising: a) probes derived from a whole blood sample for a specific disease; and b) a carrier, wherein the carrier immobilizes the probes. Such a kit may be applied to a test subject whole blood sample to diagnose, prognose or predict a disease by detecting the quantitative expression levels of specific genes associated with the disease in the test subject and then comparing to the levels of same genes expressed in a normal subject. Such a kit may also be used for monitoring a course of therapeutic treatment or monitoring the onset of overt symptoms of a disease.

Furthermore, the present invention provides a cDNA library specific for a disease, wherein the cDNA library is generated from whole blood samples.

The following examples are given for the purpose of illustrating various embodiments of the invention and are not meant to limit the present invention in any fashion.

**EXAMPLE 1** 

#### Construction of a cDNA library

RNA extracted from human tissues (including fetal heart, adult heart, liver, brain, prostate gland and whole blood) were used to construct unidirectional cDNA libraries. The first mammalian heart cDNA library was constructed as early as 1982. Since then, the methodology has been revised and optimal conditions have been developed for construction of human heart and hematopoietic progenitor cDNA libraries (Liew et al., 1984; Liew 1993, Claudio et al., 1998). Most of the novel genes which were identified by sequence annotation can now be obtained as full length transcripts.

#### **EXAMPLE 2**

#### Catalogue of blood cell ESTs

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Random partial sequencing of expressed sequence tags (ESTs) of cDNA clones from the blood cell library was carried out to establish an EST database of blood. The known genes as derived from the ESTs were categorized into seven major cellular functions (Hwang, Dempsey et al., 1997).

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#### **EXAMPLE 3**

# Differential screening of cDNA library

cDNA probes generated from transcripts of each tissue were used to hybridize the blood cell cDNA clones (Liew et al., 1997). The "positive" signals which were hybridized with P-labelled cDNA probes were defined as genes which shared identity with blood and respective tissues. The "negative" spots which were not exposed to P-labelled cDNA probes were considered to be blood-cell-enriched or low frequency transcripts.

#### **EXAMPLE 4**

# Reverse transcriptase-polymerase chain reaction (RT-PCR) assay

RNA extracted from samples of human tissue was used for RT-PCR analysis (Jin et al. 1990). Three pairs of forward and reverse primers were designed for human cardiac beta-myosin heavy chain gene (βMyHC), amyloid precurser protein (APP) gene and adenomatous polyposis-coli protein (APC) gene. The PCR products were also subjected to automated DNA sequencing to verify the sequences as derived from the specific transcripts of blood.

#### **EXAMPLE 5**

# Detection of tissue specific gene expression in human blood using RT-PCR

The beta-myosin heavy chain gene (βMyHC) transcript (mRNA) is known to be highly expressed in ventricles of the human heart. This sarcomeric protein is important for heart muscle contraction and its presence would not be expected in other non-muscle tissues and blood. In 1990, the gene for human cardiac

βMyHC was completely sequenced (Liew et al. 1990) and was comprised of 4 exons and 42 introns.

The method of reverse transcription polymerase chain reaction (RT-PCR) was used to determine whether this cardiac specific mRNA is also present in human blood. A pair of primers was designed; the forward primer (SEQ ID No. 3) was on the boundary of exons 21 and 22, and the reverse primer (SEQ ID No. 4) was on the boundary of exons 24 and 25. This region of mRNA is only present in \$MyHC and is not found in the alpha-myosin heavy chain gene (\alpha MyHC).

A blood sample was first treated with lysing buffer and then undergone centrifuge. The resulting pellets were further processed with RT-PCR. RT-PCR was performed using the total blood cell RNA as a template. A nested PCR product was generated and used for sequencing. The sequencing results were subjected to BLAST and the identity of exons 21 to 25 was confirmed to be from BMyHC (Figure 1A).

Using the same method just described, two other tissue specific genes - amyloid precursor protein (APP, forward primer, SEQ ID No. 7; reverse primer, SEQ ID No. 8) found in the brain and associated with Alzheimer's disease, and adenomatous polyposis coli protein (APC) found in the colon and rectum and associated with colorectal cancer (Groden *et al.* 1991; Santoro and Groden 1997) - were also detected in the RNA extracted from human blood (Figure 1B).

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#### **EXAMPLE 6**

#### Multiple RT-PCR analysis on a drop of blood from a normal/diseased individual

A drop of blood was extracted to obtain RNA to carry out quantitative RT-PCR analysis. Specific primers for the insulin gene were designed: forward primer (5'-GCCCTCTGGGGACCTGAC-3', SEQ ID No. 1) of exon 1 and reverse primer (5'-CCCACCTGCAGGTCCTCT-3", SEQ ID No. 2) of exons 1 and 2 of insulin gene. Such reverse primer was obtained by deleting the intron between the

exons 1 and 2. Blood samples of 4 normal subjects were assayed. It was found that the insulin gene is expressed in the blood and the quantitative expression of the insulin gene in a drop of blood is influenced by fasting and non-fasting states of normal healthy subjects (Figure 2). This very low level of expression of the insulin gene reflects the phenotypic status of a person and strongly suggests that there is a physiological and pathological role for its expression, contrary to the basal or illegitimate theory of transcription suggested by Chelly *et al.* (1989) and Kimoto (1998).

Same quantitative RT-PCR analysis was performed using insulin specific primers on RNA samples extracted from a drop of blood from a normal healthy person, a person having late-onset diabetes (Type II) and a person having asymptomatic diabetes. It was found that the insulin gene is expressed differentially amongst subjects that are healthy, diagnosed as type II diabetic, and also in an asymptomatic preclinical patient (Figure 3).

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Similarly, specific primers for the atrial natriuretic factor (ANF) gene were designed (forward primer, SEQ ID No. 5; reverse primer, SEQ ID No. 6) and RT-PCR analysis was performed on a drop of blood. ANF is known to be highly expressed in heart tissue biopsies and in the plasma of heart failure patients. However, atrial natriuretic factor was observed to be expressed in the blood and the expression of the atrial natriuretic factor gene is significantly higher in the blood of patients with heart failure as compared to the blood of a normal control patient.

Specific primers for the zinc finger protein gene (ZFP, forward primer, SEQ ID No. 9; reverse primer, SEQ ID No. 10) were also designed and RT-PCR analysis was performed on a drop of blood. ZFP is known to be high in heart tissue biopsies of cardiac hypertrophy and heart failure patients. In the present study, the expression of ZFP was observed in the blood as well as differential expression levels of ZFP amongst the normal, diabetic and asymptomatic preclinical subjects (Figure 4); although neither of the non-normal subjects has been specifically diagnosed as

suffering from cardiac hypertrophy and/or heart failure, the higher expression levels of the ZFP gene in their blood may indicate that these subjects are headed in that general direction.

It was hypothesized that a housekeeping gene such as glyceraldehyde dehydrogenase (GADH) which is required and highly expressed in all cells would not be differentially expressed in the blood of normal vs. disease subjects. This hypothesis was confirmed by RT-PCR using GADH specific primers (Figure 4). Thus, GADH is useful as an internal control.

Standardized levels of insulin gene or ZFP gene expressed in a drop of blood were estimated using a housekeeping gene as an internal control relative to insulin or ZFP expressed (Figures 5A & 5B). The levels of insulin gene expressed in each fractionated cell from whole blood were also standardized and shown in Figure 5C.

#### **EXAMPLE 7**

#### Human blood cell cDNA library

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In order to further substantiate the present invention, differential screening of the human blood cell cDNA library was conducted. cDNA probes derived from human blood, adult heart or brain were respectively hybridized to the human blood cDNA library clones. As shown in Figure 7, more than 95% of the "positively" identified clones are identical between the blood and other tissue samples.

DNA sequencing of randomly selected clones from the human whole blood cell cDNA library was also performed. This allowed information regarding the cellular function of blood to be obtained concurrently with gene identification. More than 20,000 expressed sequence tags (ESTs) have been generated and characterized to date, 17.6% of which did not result in a statistically significant match to entries in the

GenBank databases and thus were designated as "Novel" ESTs. These results are summarized in Figure 7 together with the seven cellular functions related to percent distribution of known genes in blood and in the fetal heart.

From 20,000 ESTs, 1,800 have been identified as known genes which may not all appear in the hemapoietic system. For example, the insulin gene and the atrial natriuretic factor gene have not been detected in these 20,000 ESTs but their transcripts were detected in a drop of blood, strongly suggesting that all transcripts of the human genome can be detected by performing RT-PCR analysis on a drop of blood.

In addition, approximately 400 novel genes have been identified from the 20,000 ESTs characterized to date, and these will be subjected to full length sequencing and open reading frame alignment to reduce the actual number of novel ESTs prior to screening for disease markers.

Analysis of the approximately 6,283 ESTs which have known matches in the GenBank databases revealed that this dataset represents over 1,800 unique genes. These genes have been catalogued into seven cellular functions. Comparisons of this set of unique genes with ESTs derived from human brain, heart, lung and kidney demonstrated a greater than 50% overlap in expression (Table 1).

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TABLE 1

#### Overlap of Genes Expressed in Blood \*

	Tissues	ESTs**	Overlap in Bl	ood
-	brain	134,000	60%	
25	heart	65,000	59%	
	lung	60,200	58%	
_	kidney 32	,300	54%	

\* Estimated from limited known genes of about 1,800 as derived from the database of 6,297 ESTs from human blood cell library.

\*\* Obtained from the National Centre of Biotechnology Information (NCBI), U.S.A.

#### **EXAMPLE 8**

#### Blood cell ESTs

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The results from the differential screening clearly indicate that the transcripts expressed in the whole blood are reflective of genes expressed in all cells and tissues of the body. More than 95% of detectable spots were identical from two different tissues. The remaining 5% of spots may represent cell- or tissue-specific transcripts; however, results obtained from partial sequencing to generate ESTs of these clones revealed most of them not to be cell- or tissue-specific transcripts. Therefore, the negative spots are postulated to be reflective of low abundance transcripts in the tissue from which the cDNA probes were derived.

An alternative approach that was employed to identify transcripts expressed at low levels is the large-scale generation of expressed sequence tags (ESTs). There is substantial evidence regarding the efficiency of this technology to detect previously characterized (known) and uncharacterized (unknown or novel) genes expressed in the cardiovascular system (Hwang & Dempsey et al.. 1997). In the present invention, 20,000 ESTs have been produced from a human blood cell cDNA library and resulted in the identification of approximately 1,800 unique known genes (Table 2)

In the most recent GenBank release, analysis of more than 300,000 ESTs in the database (dbESTs) generated more than 48,000 gene clusters which are thought to represent approximately 50% of the genes in the human genome. Only 4,800 of the dbESTs are blood-derived. In the present invention, 20,000 ESTs have

been obtained to date from a human blood cDNA library, which provides the world's most informative database with respect to blood cell transcripts. From the limited amount of information generated so far (i.e. 1,800 unique genes), it has already been determined that more than 50% of the transcripts are found in other cells or tissues of the human body (Table 2). Thus, it is expected that by increasing the number of ESTs generated, more genes will be identified that have an overlap in expression between the blood and other tissues. Furthermore, the transcripts for several genes which are known to have tissue-restricted patterns of expression (i.e. βMyHC, APP, APC, ANF, ZFP) have also been demonstrated to be present in blood.

Most recently, a cDNA library of human hematopoietic progenitor stem cells has also been constructed. From the limited set of 1,000 ESTs, there are at least 200 known genes that are shared with other tissue related genes (Claudio *et al.* 1998).

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Table 2 demonstrates the expression of known genes of specific tissues in blood cells. Previously, only the presence of "housekeeping" genes would have been expected. Additionally, the presence of at least 25 of the currently known 500 genes corresponding to molecular drug targets was detected. These molecular drug targets are used in the treatment of a variety of diseases which involve inflammation, renal and cardiovascular function, neoplastic disease, immunomodulation and viral infection (Drews & Ryser, 1997). It is expected that additional novel ESTs will represent future molecular drug targets.

# TABLE 2

# Comparison of 1,800 Unique Genes Identified in the Blood Cell cDNA Library to Genes Previously Identified in Specific Tissues

Consideration	No. of ESTs	Accession No.		•:	Tiss		liet-	ib	ion
Gene Identification	LOID		- 51	Br	IIS8I IH				ION .
400 (4)	· · · · · · ·	l Dagger	В		_ n	K	Li	Lu +	
100 kDa coactivator	2	U22055		+		<u> </u>	<u> </u>	I	<u> </u>
10kD protein (BC10)	2	AF053470		+	+		+	+	<u> </u>
14-3-3 epsilon	2	U54778		+	+			+	
14-3-3 protein	11	U28964		+	+		+		
15 kDa selenoprotein (SEP15)	1	AF051894		+	+			+	
1-phosphatidylinositol-4- phosphate 5-kinase isoform C	1	S78798							
23 kD highly basic protein	21.	X56932	+	+	+	+	+	+,	·
2-5A-dependent RNase	. 1	L10381		Ì			Π		
2'-5'oligoadenylate synthetase 2 (OAS2)	4	M87284	В						
26S proteasome subunit 11	1	AF086708							
36 kDa phosphothyrosine protein	. 2	AJ223280	. 1		+				` `
3-7 gene product (non- exact 86%aa)	1	D64159							
3-phosphoglycerate dehydrogenase (PGAD)	1	AF006043	ΤΤ	+	+		i,	+	
3-prime-phosphoadenosine 5-prime-phosphosulfate synthase 1 (PAPSS1)	2	U53447	+	+	+	+		+	
46kd mannose 6- phosphate receptor (MPR46) (low match)	1	X56257	·						
5-aminoimidazole-4- carboxamide ribonucleotide transformylase	1	D89976	Y.						·
5'-nucleotidase	3	D38524	Т	+			+	Γ	
6-phosphofructo-2- kinase/fructose-2,6- biphosphatase 4 (PFKFB4)	. 1	D49818		+					
6-phosphofructo-2- kinase/fructose-2,6- bisphosphatase (PF2K)	1	AF041829							
71 kd heat shock cognate protein hsc70	23	Y00371							
76 kDa membrane protein (P76)	2	U81006		+	+	+	+	+	
8-oxoguanine DNA glycosylase (OGG1)		U96710	В				+	+	
a disintegrin and metalloprotease domain 10 (ADAM10)	1	AF009615	ा ।				+		
a disintegrin and metalloprotease domain 8 (ADAM8)	1 -	D26579	В	+					
A kinase anchor protein 95 (AKAP95)	2	Y11997	B, T activated		+			+	-
A kinase anchor protein, 149kD (AKAP149)	. 2	X97335		+	+	+		+	

								•	
A4 differentiation- dependent protein (A4),	1	U93305							
triple LIM domain protein									
(LMO6), and  synaptophysin (SYP);			·				1		
calcium channel alpha-1 subunit (CACNA1F)		. •							
ABL and putative M8604	1	U07561				ļ		-	
Met protein Absent in melanoma 1	1 .	U83115	+	+	-		┢	+	
(AIM1) accessory proteins	2	Z31696		+	+	-	H	<u> </u>	
BAP31/BAP29 (DXS1357E)	_		·		ļ	٠.			
acetyl-Coenzyme A	2	X12966	+	•+	+	+	+	+	
(peroxisomal 3-oxoacyl- Coenzyme A thiolase)						. *			
(ACAA) acetyl-Coenzyme A	1	D88152	Tlymphoma	+	+	-	├—	-	
transporter (ACATN) acidic 82 kDa protein	4	U15552		*	ļ	<u> </u>		<u> </u>	
acidic oz kDa protein	1	Y07969	l B	+	+		+	+	
leucines (SSP29)			,				·		
Aconitase 2, mitochondrial (ACO2)		U80040	+	+	+	+		+	
actin binding protein MAYVEN	. 1	AF059 <b>569</b>							
actin, beta (ACTB)	158	X04098	T, B	+	+		+		
actin, beta (ACTB) (non- exact, low match 73%)	1 .	M10277	·						
actin, gamma (low score)	1	K00791						•	
actin, gamma 1 (ACTG1)	4 .	X04098	+	+	+	+	+	+	high in many libraries
actin-binding LIM protein (ABLIM)	· 4	D31883		+	+	+		+	
Actinin, alpha 1 (ACTN1)	8	M95178		+	+	·+		+	
actinin, alpha 4 (ACTN4)	1	D89980		+	+		+		
activated p21cdc42Hs kinase (ACK)	1	L13738	В	+				+	
activated RNA polymerase II transcription cofactor 4 (PC4)	1	X79805	+	+	+	+		+	
activating transcription factor 1 (ATF1)	- 1	X55544			+				
activating transcription factor 2 (ATF2)	1	X15875		+	+		+		
activating transcription	2	M86842			$\vdash$	一	+	+	
factor 4 (tax-responsive enhancer element B67) (ATF4)	2		·	•	·				
active BCR-related gene (ABR)	. 1	U01147	+	+.	+	+		+	
acyl-CoA oxidase (AOX)	<del></del>	U03254							
acyl-Coenzyme A dehydrogenase, C-4 to C- 12 straight chain (ACADM)	.2	M16827			٠	·			÷
acyl-Coenzyme A dehydrogenase, very long	3	D43682	+	+	+	+	+	+	
chain (ACADVL) acyloxyacyl hydrolase (neutrophil) (AOAH)	3	M62840	1		+	·	+	+	
adaptin, delta (ADTD)	2	U91930	-	. +	+		+.		
adaptin, delta (ADTD) (non-exact 59%)	1	AC005328							
adaptin, gamma (ADTG)	1	Y12226		+	+	+		+	· · ·
adaptor complex sigma3B (AP3S3)	. 2	X99459		+		+		+	
adaptor protein p150	1	Y08991							
adducin 1 (alpha) (ADD1)	2	L07261		+	+		+		

(adducin 1 (alpha) (add1)	3	L29296	<del></del>	1 +	+	1 +	r ·	+	<del> </del>	<del>-</del>	
adducin 3 (gamma) (ADD3)	3 -	U37122	B.W	+	-	-	+	-	<u> </u>		<del></del>
adenine nucleotide	2	M57424	3, 11	+	+	<b>-</b>	+	Ľ		·	
translocator 2 (fibroblast) (ANT2)	· .					ŀ	*				
adenine nucleotide translocator 2 (fibroblast) (ANT2) (non-exact 81%)	1	J02683			٠.						
adenine nucleotide translocator 2 (fibroblast)	1	J02683						*			
(ANT2) (non-exact, 79%) adenine nucleotide translocator 2 (fibroblast)	1	J02683			<u> </u>			-			H
(ANT2) (non-exact, 86%) adenine nucleotide translocator 3 (liver)	3	J03592	k .	+	+		+	+			
(ANT3) adenosine deaminase, RNA-specific (ADAR)	6	U18121		+	+		+	-			
adenylate cyclase 3 (ADCY3)	2	AF033861	<del>  </del>	+	+	+	+	+	· -		
adenylate cyclase 7 (ADCY7)	. 1	D25538		·	<u> </u>						
adenylate kinase 2 (AK2)	2	U39945		+	+	$\vdash$	+	+			
adenylate kinase 3 (AK3) (non-exact, 67%)	1	X60673									
adenylyl cyclase- associated protein (CAP)	. 28	M98474			+		+				
adipose differentiation- related protein; adipophilin (ADFP)	. <b>1</b>	X97324			+		+	+			
ADP-ribosylation factor 1 (ARF1)	13	M84326		+	+		+	+			,
ADP-ribosylation factor 3 (ARF3)	. 2	M33384		+	+	·	+				
ADP-ribosylation factor 4 (ARF4)	1	M36341	T lymphoma	+	+			+			
ADP-ribosylation factor 5 (ARF5)	1	M57567	·		+ .	+	+	+			
ADP-ribosylation factor domain protein 1, 64kD (ARFD1)	1	L04510		+		,					
ADP-ribosyltransferase (NAD+; poly (ADP-ribose) polymerase) (ADPRT)	.4	M32721	+	+	+	+	+	+	•		
adrenergic, beta, receptor kinase 1 (ADRBK1)	2	X61157	В	+			+				
adrenoleukodystrophy-like 1 (ALDL1)	1	AJ000327	·								
AE-binding protein 1 (AEBP1) (non-exact, 62%)	1	D86479		,							
AF-17	1	U07932	· ·						-		
A-gamma-globin .	1	V00514			·						<del></del>
A-gamma-globin (chromosome 11 allele)	1	J00176							· .		
agammaglobulinaemia tyrosine kinase (ATK)	1	U78027									
AHNAK nucleoprotein (desmoyokin) (AHNAK)	4	M80899	+	+	+	+		+			
alanyl (membrane) aminopeptidase	1	X13276	·		+		+				
(aminopeptidase N, aminopeptidase M,	•										
microsomal aminopeptidase, CD13,		·									
p150) (ANPEP) alcohol dehydrogenase 5 (class III), chi polypeptide	1	M29872									
(ADH5) aldehyde dehydrogenase	1	AF003341		+			+	+			
1, soluble (ALDH1)		• •	<u> </u>								

•							_	•	
aldehyde dehydrogenase 10 (fatty aldehyde dehydrogenase) (ALDH10)	. 2	U75286					9		
aldehyde reductase 1 (low Km aldose reductase) (ALDR1)	3	J04795	В	+	+	+	+		
aldo-keto reductase family 1, member A1 (aldehyde reductase) (AKR1A1)	2	J04794	В	+	+		+	·	,
aldo-keto reductase family 1, member C3 (3-alpha hydroxysteroid	1	D17793		+	+ .	+		+	
dehydrogenase, type II) (AKR1C3)		V4667E		ļ.,.		·		+	
aldo-keto reductase family 7, member A2 (aflatoxin aldehyde reductase) (AKR7A2)	1	Y16675		+	+		+		
aldolase A, fructose- bisphosphate (ALDOA)	7	X12447		+	+		+		
aldolase C, fructose- bisphosphate (ALDOC) alkaline phosphatase.	2.	X05196 4502062		+	+.		+	1	
liver/bone/kidney (ALPL) ALL-1 (=L04731;L04284	4 :	Z69780	0.5	-		_			1
HRX) alpha mannosidase II isozyme	1	D55649		+	<u> </u>		+		
alpha thalassemia/mental retardation syndrome X- linked (ATRX)	3	U75653	+	+	+	+		+	- 17
alpha-2 macroglobulin	1	Z11711							
alpha-2-globin	2	V00516		İ			· _		
alpha-2-macroglobulin receptor/lipoprotein receptor protein (A2MR/LRP)		U06985	·						
alpha-polypeptide of N- acetyl-alpha- glucosaminidase (HEXA)	1	M13520	0						
alpha-spectrin	1	X86901		1			٠.		
alpha-subunit of Gi2 a (GTP-binding signal transduction protein)	. 1	X07854							
aminin receptor 1 (67kD); Ribosomal protein SA (LAMR1)	2	J03799	T	+	+		+	+	
aminolevulinate, delta-, dehydratase (ALAD)	. 1	X64467		+					·
amino-terminal enhancer of split (AES)	2	X73358	+	+	+	+		+	
amino-terminal enhancer of split (AES)	3	U04241	. В	+	+		+	+	
AMP deaminase isoform L (AMPD2)	8	M91029		+				<del> </del>	
amphiphysin (Stiff-Mann syndrome with breast cancer 128kD autoantigen) (AMPH)	1	U07616	В.						
amphiphysin (Stiff-Mann syndrome with breast cancer 128kD autoantigen) (AMPH)(non-exact, 68%)	1	U07616	·			·			
amphiphysin (Stiff-Mann syndrome with breast cancer 128kD autoantigen) (AMPH)(non-exact, 68%)		U07616							
amphiphysin II	4	U87558	1	+	+		+		
amphiphysin II (67%aa amphiphysin?)	1	AF068915							
amphiphysin II (non-exact 69% aa)	1	AF001383							

amphiphysin-like (AMPHL)	1	U68485	· i	+	+				
amphiphysin-like (AMPHL)	<del>- i</del>	AF068918				-		-	
(low match)	. 1	D50692	В, Т				+	<u> </u>	
	· · · ·		5, 1					+	<u> </u>
amyloid beta (A4) precursor protein-binding, family B, member 1 (Fe65) (APBB1)	.1	L77864		+	+	+		*	
amyloid beta (A4) precursor-like protein 2	6	L27631	Tlymphoma	+	+		+	+	
(APLP2)	<u>.</u>	LUZIOGE				ļ	<u> </u>	<u> </u>	
ankyrin 3, node of Ranvier (ankyrin G) (ANK) (non- exact, 50%)	1	U43965							
ANX1)	3	X05908			+	, . <b>.+</b>		+	
annexin II	1	D28364							
annexin II (lipocortin II; calpactin I, heavy polypeptide) (ANX2)	7	D00017	+	+	+	+	+	+	high in many librane
annexin IV (placental anticoagulant protein II) (ANX4)	1	M19383	,	+	+	+	+	+	
annexin V (endonexin II) (ANX5)	2	M21731		+	+	+		+	
annexin V (endonexin II) (ANXV)	1.	M19384		+	. +	+	·	+	
annexin VI (p68) (ANX6)	- 6	Y00097		+	+	+		+	, , , , , , , , , , , , , , , , , , ,
annexin VII (synexin) (ANX7)	1	J04543		+ .	+	+		+	
antigen identified by monoclonal antibodies 12E7, F21 and O13 (MIC2)	2	M16279		+	+	+		+	
antigen identified by monoclonal antibodies 4F2, TRA1.10, TROP4, and T43	3	J02939		+	+	+	+	+	
(MDU1) antigen TQ1			<del> </del>	_	<del> </del>	╁		├	
anti-oxidant protein 2 (non- selenium glutathione peroxidase, acidic calcium-	<del></del>	D14662		+	+	+	+	+	
independent phospholipase A2) (KIAA0106) APEX nuclease	. 5	X66133		-	+		+	+	
(multifunctional DNA repair enzyme) (APEX)								,	
Apolipoprotein L (APOL) (59%aa)	1	Z82215							* .
apoptosis inhibitor 1 (API1)	1	L49431.		+	+	+	+	+	
apoptosis inhibitor 4 (survivin) (API4)	1 .	U75285	B, W	+	+		+		
apoptosis inhibitor 5 (API5)		U83857	Tlymphoma	+	-	<del>                                     </del>	+		1 .
apoptosis specific protein (ASP)	1	Y11588	В	+			+	+	
apoptotic protease activating factor (APAF1)	1	AF013263	В	+	+		+		
aquaporin 3 (AQP3)	1	AB001325		$\vdash$			+	$\vdash$	
aquaponn 9 (AQP9)	7	AB008775	Tactivated			$\vdash$	+	1	
arachidonate 12- lipoxygenase (ALOX12)	1	M58704	<u> </u>				+	+	
arachidonate 5- lipoxygenase-activating protein (ALOX5AP)	3	X52195	+	+		+		+	
anadne homolog (ARI)	1	AJ009771	+	+	+	+		+	
ariadne-2 (D. melanogaster) homolog (all-trans retinoic acid inducible RING finger.) (ARI2)	1	AF099149	*	+	+	+		+	

ARP1 (actin-related protein 1, yeast) homolog A (centractin alpha)	. 1	X82206		+			+		
(ACTR1A)									
ARP2 (actin-related protein 2, yeast) homolog (ACTR2)	9 :	AF006082		· +	+		+	+	
ARP2/3 protein compex subunit 34 (ARC34)	5	AF006085	Tactivated, W	+	+		+		*
Arp2/3 protein compex subunit p41 (ARC41)	6	AF006084	monocyte stimulated	+	+		+		
Arp2/3 protein compex subunit p41 (ARC41)) (low	1 .	AF006084							
match) Arp2/3 protein complex subunit p16 (ARC16)	20	AF017807		+	+.		+	+	
	· i. 2 ·	AF006087	. ė	+	+		+	+	
Arp2/3 protein complex	3	AF006086	· w		·	·	+	+	
subunit p21(ARC21) ARP3 (actin-related protein	11	AF006083	w		+		+	+	
3, yeast) homolog (ACTR3) arrestin, beta 2 (ARRB2)	1	AF106941	B, T, W	+	+		+	$\vdash$	
arsA (bacterial) arsenite transporter, ATP-binding, homolog 1 (ASNA1)	1	AF047469	В, Т	+			+		
aryl hydrocarbon receptor nuclear translocator-like (ARNTL)	2	AF044288	В	+	+		+		
aryl hydrocarbon receptor- interacting protein (AIP)	1	U31913	+	+	+	+		+	
arylsulfatase A (ARSA)	1	X52151	Tactivated	+		-	+	Н	
asialoglycoprotein receptor 2 (ASGR2)	1	M11025	- 8		· ·		+	+	
asparaginyl-tRNA synthetase (NARS)	. 3	D84273		+	+		+		
aspartyI-tRNA synthetase (DARS)	1	J05032	В	+	+		+		
ataxia telangiectasia mutated (includes complementation groups A, C and D) (ATM)	<b>1</b>	U82828	В, Т		+		+		
ataxin-2-like protein A2LP	. 1	AF034373	B, T activated	+	+			+	
ATF6	1	AF005887	activated	+	<del>                                     </del>	$\vdash$	+		
ATP binding cassette transporter (ABCR) (non-exact 80%)		U88667							,
ATP synthase (F1-ATPase) alpha subunit, mitochondrial	1	X59066			Ť				
ATP synthase beta subunit gene	1	M19482							:
ATP synthase, H+ transporting, mitochondrial F0 complex, subunit b, isoform 1 (ATP5F1)	1	X60221	+	+	+	+		+	
ATP synthase, H+ transporting, mitochondrial F0 complex, subunit c (subunit 9), isoform 1	1	X69907	Tactivated	+	+		+	+	
(ATP5G1) ATP synthase, H+ transporting, mitochondrial	<b>3</b>	D14710		•					
F1 complex, alpha subunit, isoform 1, cardiac muscle (ATP5A1)									
ATP synthase, H+ transporting, mitochondrial F1 complex, alpha subunit, isoform 1, cardiac muscle (ATP5A1) (low match)	1	D14710							4

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ATP synthase, H+	2	M27132		:				*	
transporting, mitochondrial			· [	- 1					
F1 complex, beta	٠	,		-				.	9
polypeptide (ATP5B)					•				
ATP synthase, H+	- 1	D16563	. W	+	+	+	+		
transporting, mitochondrial				ı		1 1			
F1 complex, gamma	•		l i	ı		.			i - i
polypeptide 1 (ATP5C1)		*		,					
ATP synthase, H+	1	AF092124	+	+	+	+	+	+	
transporting, mitochondrial		;							· 1
F1F0, subunit g (ATP5JG)				-					
ATP/GTP-binding protein	2	U73524	. +	+	+	+		+	
(HEAB)	•	•							
ATPase, Ca++	5	Z69881		+					
transporting, ubiquitous	-		l i						
(ATP2A3)	,		J				l		
ATPase, H+ transporting,	2	D89052	+	+	• +	+	·	+	
lysosomal (vacuolar proton				•				·	
pump) 21kD (ATP6F)		•							
ATPase, H+ transporting,	1	X76228	I	+	+	+		+	
lysosomal (vacuolar proton			1000				1		. 1
pump) 31kD (ATP6E)		*	[ ·			L	L	L	
ATPase, H+ transporting,	5	X69151		+	+	+	l .	+	
lysosomal (vacuolar proton	. 1		]	.			l ·		
pump) 42kD; Vacuolar			[			1	ŀ	1	l
proton-ATPase.			1			1	١.		
subunit C; V-ATPase,			1 1			1 -	l	1	
subunit C (ATP6D)			<u> </u>		Ŀ	L	<u>L</u>	L	
ATPase, H+ transporting,	3	L09235		+		+	1		
livsosomal (vacuolar proton			j l			ŀ	l	· ·	j
pump), alpha polypeptide,			i l			l	Ì	i	
70kD, isoform 1 (ATP6A1)			, ·		1	L	L	L	
ATPase, H+ transporting,	6	X62949	+	+	+	+		+	· 7
lysosomal (vacuolar proton		•						-	٠ .
pump), beta polypeptide,					ŀ	1	l	1	
learnest and any area									
156/58kD, isoform 2					ŀ				l
56/58kD, isoform 2 (ATP6B2)									
(ATP6B2)	2	AF038954	+	+	+	+		+	high in testis
(ATP6B2) ATPase, H+ transporting, lysosomal (vacuolar proton	2	AF038954	+	+	+	+		+	high in testis
(ATP6B2) ATPase, H+ transporting, lysosomal (vacuolar proton	2	AF038954	+	+	+	+		+	high in testis
(ATP6B2) ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting,	2	AF038954 D16469	+	+	+	+		+	high in testis
(ATP6B2) ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton	•		+		·				high in testis
(ATP6B2) ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1)	•		+		·				high in testis
(ATP6B2) ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1)	•		+		·				high in testis
(ATP6B2) ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton	1	D16469	+	+	+	+		+	high in testis
(ATP6B2) ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50	1	D16469	+	+	+	+		+	high in testis
(ATP6B2) ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50)	1	D16469	+	+	+	+		+	high in testis
(ATP6B2) ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated)	1	D16469 AF027302	+	+	+	+		+	high in testis
(ATP6B2) ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette	1	D16469 AF027302	+	+	+	+		+	high in testis
(ATP6B2) ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial)	1	D16469 AF027302	+ + T lymphoma	+	+	+	+	+	high in testis
(ATP6B2) ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1	1	D16469  AF027302  AF047690	+ + T lymphoma	+	+	+	+	+	high in testis
(ATP6B2) ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA helicase	1	D16469  AF027302  AF047690	+ T lymphoma T activated	+	+	+	+	+	high in testis
(ATP6B2) ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA helicase autoantigen (Hs.75528)	1 1 1 2	D16469  AF027302  AF047690  AJ010840  L05425		+	+	+	+	+	
(ATP6B2) ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA helicase autoantigen (Hs.75528)	1	D16469  AF027302  AF047690  AJ010840		+	+	+	+	+	high in testis
(ATP6B2) ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA helicase autoantigen (Hs.75528) autoantigen (Hs.75528) (non-exact 84%)	1 1 2 1	D16469  AF027302  AF047690  AJ010840  L05425  L05425	T activated	+	+	+	+	+	
(ATP6B2) ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA helicase autoantigen (Hs.75528) autoantigen (Hs.75528) (non-exact 84%) autoantigen (Hs.75682)	1 1 2 1 1	D16469  AF027302  AF047690  AJ010840  L05425  L05425  U17474		+	+	+	+	+	
(ATP6B2) ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA helicase autoantigen (Hs.75528) autoantigen (Hs.75528) (non-exact 84%)	1 1 2 1	D16469  AF027302  AF047690  AJ010840  L05425  L05425	T activated	+	+	+	+	+	
(ATP6B2) ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA helicase autoantigen (Hs.75528) autoantigen (Hs.75528) (non-exact 84%) autoantigen (Hs.75682) autoantigen La/SS-B	1 1 2 1 1 1	D16469  AF027302  AF047690  AJ010840  L05425  L05425  U17474	T activated	+	+	+	+	+	
(ATP6B2) ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA helicase autoantigen (Hs.75528) autoantigen (Hs.75528) (non-exact 84%) autoantigen (Hs.75682) autoantigen La/SS-B axin (AXIN1)	1 1 2 1 1 1 1	D16469  AF027302  AF047690  AJ010840  L05425  L05425  U17474  Z35127  AF009674	T activated	+	+	+	+	+	
(ATP6B2) ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA helicase autoantigen (Hs.75528) autoantigen (Hs.75528) autoantigen (Hs.75682) autoantigen La/SS-B axin (AXIN1) axonemal dynein heavy	1 1 2 1 1 1	D16469  AF027302  AF047690  AJ010840  L05425  L05425  U17474  Z35127	T activated	+	+	+	+	+	
(ATP6B2) ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA helicase autoantigen (Hs.75528) autoantigen (Hs.75528) autoantigen (Hs.75682) autoantigen La/SS-B axin (AXIN1) axonemal dynein heavy chain (DNAH17)	1 1 1 1 1	D16469  AF027302  AF047690  AJ010840  L05425  L05425  U17474  Z35127  AF009674  AJ000522	T activated	+	+	+	+	+	
(ATP6B2) ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA helicase autoantigen (Hs.75528) autoantigen (Hs.75528) autoantigen (Hs.75682) autoantigen (Hs.75682) autoantigen La/SS-B axin (AXIN1) axonemal dynein heavy chain (DNAH17) BAI1-associated protein 3	1 1 2 1 1 1 1	D16469  AF027302  AF047690  AJ010840  L05425  L05425  U17474  Z35127  AF009674	T activated	+	+	+	+	+	
(ATP6B2) ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA helicase autoantigen (Hs.75528) autoantigen (Hs.75528) (non-exact 84%) autoantigen La/SS-B axin (AXIN1) axonemal dynein heavy chain (DNAH17) BAI1-associated protein 3 (BAIAP3) (non-exact 54%)	1 1 1 1 1 1	D16469  AF027302  AF047690  AJ010840  L05425  L05425  U17474  Z35127  AF009674  AJ000522  AB017111	T activated	+	+	+	+	+	
(ATP6B2) ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA helicase autoantigen (Hs.75528) autoantigen (Hs.75528) (non-exact 84%) autoantigen La/SS-B axin (AXIN1) axonemal dynein heavy chain (DNAH17) BAI1-associated protein 3 (BAIAP3) (non-exact 54%) basement membrane-	1 1 1 1 1	D16469  AF027302  AF047690  AJ010840  L05425  L05425  U17474  Z35127  AF009674  AJ000522	T activated	+	+	+	+	+	
(ATP6B2) ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA helicase autoantigen (Hs.75528) autoantigen (Hs.75528) autoantigen (Hs.75682) autoantigen La/SS-B axin (AXIN1) axonemal dynein heavy chain (DNAH17) BAI1-associated protein 3 (BAIAP3) (non-exact 54%) basement membrane-induced gene (ICB1)	1 1 1 1 1 1 1 1	D16469  AF027302  AF047690  AJ010840  L05425  L05425  U17474  Z35127  AF009674  AJ000522  AB017111  AF044896	T activated	+	+	+	+	+	
(ATP6B2) ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA helicase autoantigen (Hs.75528) autoantigen (Hs.75528) autoantigen (Hs.75582) autoantigen La/SS-B axin (AXIN1) axonemal dynein heavy chain (DNAH17) BAI1-associated protein 3 (BAIAP3) (non-exact 54%) basement membrane-induced gene (ICB1) basic leucine zipper	1 1 1 1 1 1	D16469  AF027302  AF047690  AJ010840  L05425  L05425  U17474  Z35127  AF009674  AJ000522  AB017111	T activated	+	+	+	+	+	
(ATP6B2) ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA helicase autoantigen (Hs.75528) autoantigen (Hs.75528) autoantigen (Hs.75582) autoantigen La/SS-B axin (AXIN1) axonemal dynein heavy chain (DNAH17) BAI1-associated protein 3 (BAIAP3) (non-exact 54%) basement membrane-induced gene (ICB1) basic leucine zipper nuclear factor 1 (JEM-1)	1 1 1 1 1 1 1 1	D16469  AF027302  AF047690  AJ010840  L05425  L05425  U17474  Z35127  AF009674  AJ000522  AB017111  AF044896	T activated	+	+	+	+	+	
(ATP6B2) ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA helicase autoantigen (Hs.75528) autoantigen (Hs.75528) autoantigen (Hs.75528) autoantigen (Hs.75682) autoantigen (Hs.75682) autoantigen (Hs.75682) autoantigen (Hs.75682) basement membrane-induced gene (ICB1) basic leucine zipper nuclear factor 1 (JEM-1) (BLZF1)	1 1 1 1 1 1 1 2	D16469  AF027302  AF047690  AJ010840  L05425  L05425  U17474  Z35127  AF009674  AJ000522  AB017111  AF044896  U79751	T activated B	+	+ + +	+		+ + + + + + + + + + + + + + + + + + + +	
(ATP6B2) ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA helicase autoantigen (Hs.75528) autoantigen (Hs.75528) (non-exact 84%) autoantigen (Hs.75682) autoantigen (Hs.75682) autoantigen La/SS-B axin (AXIN1) axonemal dynein heavy chain (DNAH17) BAIT-associated protein 3 (BAIAP3) (non-exact 54%) basement membrane-induced gene (ICB1) basic leucine zipper nuclear factor 1 (JEM-1) (BLZF1)	1 1 1 1 1 1 1 1	D16469  AF027302  AF047690  AJ010840  L05425  L05425  U17474  Z35127  AF009674  AJ000522  AB017111  AF044896	T activated	+	+	+	+	+	
(ATP6B2) ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA helicase autoantigen (Hs.75528) autoantigen (Hs.75528) (non-exact 84%) autoantigen (Hs.75682) autoantigen La/SS-B axin (AXIN1) axonemal dynein heavy chain (DNAH17) BAI1-associated protein 3 (BAIAP3) (non-exact 54%) basement membrane-induced gene (ICB1) basic leucine zipper nuclear factor 1 (JEM-1) (BLZF1) basic transcription factor 3 (BTF3)	1 1 1 1 1 1 2 5	D16469  AF027302  AF047690  AJ010840  L05425  L05425  U17474  Z35127  AF009674  AJ000522  AB017111  AF044896  U79751  X74070	T activated B	+	+ + +	+		+ + + + + + + + + + + + + + + + + + + +	
(ATP6B2) ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA helicase autoantigen (Hs.75528) autoantigen (Hs.75528) (non-exact 84%) autoantigen (Hs.75682) autoantigen (Hs.75682) autoantigen La/SS-B axin (AXIN1) axonemal dynein heavy chain (DNAH17) BAIT-associated protein 3 (BAIAP3) (non-exact 54%) basement membrane-induced gene (ICB1) basic leucine zipper nuclear factor 1 (JEM-1) (BLZF1)	1 1 1 1 1 1 1 2	D16469  AF027302  AF047690  AJ010840  L05425  L05425  U17474  Z35127  AF009674  AJ000522  AB017111  AF044896  U79751	T activated B	+	+ + +	+		+ + + + + + + + + + + + + + + + + + + +	
(ATP6B2) ATPase, H+ transporting, lysosomal (vacuolar proton pump), member J (ATP6J) ATPase, H+ transporting, lysosomal (vacuolar proton pump), subunit 1 (ATP6S1) ATP-binding cassette 50 (TNF-alpha stimulated) (ABC50) ATP-binding cassette protein M-ABC1 (mitochondrial) ATP-dependent RNA helicase autoantigen (Hs.75528) autoantigen (Hs.75528) (non-exact 84%) autoantigen (Hs.75682) autoantigen La/SS-B axin (AXIN1) axonemal dynein heavy chain (DNAH17) BAI1-associated protein 3 (BAIAP3) (non-exact 54%) basement membrane-induced gene (ICB1) basic leucine zipper nuclear factor 1 (JEM-1) (BLZF1) basic transcription factor 3 (BTF3)	1 1 1 1 1 1 2 5	D16469  AF027302  AF047690  AJ010840  L05425  L05425  U17474  Z35127  AF009674  AJ000522  AB017111  AF044896  U79751  X74070	T activated B	+	+ + +	+		+ + + + + + + + + + + + + + + + + + + +	

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B-cell CLL/lymphoma 6 (zinc finger protein 51) (BCL6)	1	U00115		+	+				
B-cell translocation gene 1, anti-proliferative (BTG)	1	X61123			+			+	
BCL2/adenovirus E1B 19kD-interacting protein 2 (BNIP2)	1	U15173	В.	+			+	+	. *
BCL2/adenovirus E1B 19kD-interacting protein 3- like (BNIP3L)	2	AF067396		+	+	+	·	+	
beclin 1 (coiled-coil, myosin-like BCL2- interacting protein) (BECN1)	1	AF077301	В	+	+		+		
beta-1,2-N- acetylglucosaminyltransfer ase II (MGAT2)	2	U15128							
beta-2-microglobulin (B2M)	63	S82297	+	+	+	. +	+	+	high in invasive prostate tumor
beta-hexosaminidase alpha chain (HEXA)	7	M16411 V00599	· · ·	+	+	+	+	+	high in many libraries
beta-tubulin beta-tubulin (non-exact,	1.	AF070561	. <b>T</b>	+	<u> </u>	-	<u> </u>	<u> </u>	Ingil III many libraries
76%) beta-tubulin, pseudogene	1	J00315		-	•				
BING4	1	Z97184		1			<b>-</b>	<del>                                     </del>	
biotinidase (BTD) (non-eact 62%)	1	U03274	1						
biotinidase (BTD) (non- exact 70%)	1	U03274							
biotinidase (BTD) (non- exact, 56%)	· 1	U03274				· .			
BIOTINIDASE PRECURSOR	1	P43251							
biphenyl hydrolase-like (serine hydrolase) (BPHL)	1	X81372		+			+		
bone marrow stromal cell antigen 1 (BST1)	1	D21878				<u> </u>	+		
box-dependent myc- interacting protein isoform BIN1-10 (BIN1)	1	AF043900			٠.				
box-dependent myc- interacting protein isoform BIN1-10 (BIN1) (non-exact, 64%)	· .	AF043900	4		·				
brain my047 protein	1	AF063605	T	+	+		+	ļ	
branched chain keto acid dehydrogenase E1, alpha polypeptide (maple syrup urine disease) (BCKDHA)	3	Z14093	•				. *	.*	
BRCA1 associated protein- 1 (ubiquitin carboxy- terminal hydrolase) (BAP1)	1	D87462	+	+	+	+			
BRCA1, Rho7 and vati genes, and ipf35	1	L78833			•				
breakpoint cluster region protein, uterine leiomyoma, 1; barrier to autointegration factor (BCRP1)	2	AF044773	÷ .	+	*				
breakpoint cluster region protein, uterine leiomyoma, 2 (BCRP2)	2	AF044774		. *	+		+	+	
breast cancer anti-estrogen resistance 3 (BCAR3) (non-exact 73%) bromodomain-containing	1	U92715 · · · · · · ·		+			_		3
protein, 140kD (peregrin) (BR140) Bruton's	7	U13424				_	_		
agammaglobulinemia tyrosine kinase (Btk)	<b>'</b> .	013424							

									·
Bruton's tyrosine kinase (BTK)	1	U78027							
Bruton's tyrosine kinase (BTK), alpha-D- galactosidase A (GLA), L44-like ribosomal protein (L44L) and FTP3 (FTP3)	1	U78027							
BS4	1	AF108083			•				
BTG2 (BTG2)	6	Y09943	+ .	+	+	· +		+	
BTK region clone ftp	1	U78027	+	+	+	+		+	
BTK region clone ftp-3	1	U01923		+	+		+		
BUB3 (budding uninhibited by benzimidazoles 3, yeast) homolog (BUB3)	4	AF053304	+	+	+	+		+	·
Survice response factor 1 (EGF-response factor 1) (BRF1)	<b>4</b> .1	X₹9067	•	4	4	P <sup>3</sup>		+	
butyrophilin (BTF1)	7	U90543		+	+		+		<u> </u>
butyrophilin like receptor	1	AB020625.1							
CAG repeat containing (CTG4A)	2	U80744		+	+				
CAGH32	2	U80743	·	+	+		+	<u> </u>	
calcium channel, voltage- dependent, L type, alpha 1D subunit (CACNA1D) (low match)	1	M83566							
calcium/calmodulin- dependent protein kinase (CaM kinase) II gamma (CAMK2G)	· . 1	AF069765		+	+	+		+	
calcium/calmodulin- dependent protein kinase kinase (KIAA0787)	. 1	AF101264	. В	+	+		+		
calmodulin (=M19311)	7	D45887							
calmodulin 1 (phosphorylase kinase, delta) (CALM1)	6	M27319	В	+	+		+	+	
calnexin (CANX)	3	M94859	T	+			+	+	
calpain, large polypeptide L1 (CAPN1)	5	X04366	•	+	+		+	+	
calpain, large polypeptide L2 (CANP2)	5	M23254		+	+				
calpain, small polypeptide (CAPN4)	1	X04106		+	+		+	+	
calpastatin (CAST)	3	D16217					+	<u> </u>	
Calponin 2	2	D83735		+	<u> </u>	+		+	
calponin 2 (CNN2)	1	D83735	B, T	+			+	L	`.
calponin 2 (CNN2) (low score)	.1	D83735		ļ.					
calumenin (CALU)	3	AF013759	В		+		+	+	
cAMP response element- binding protein CRE-Bpa (H_GS165L15.1)	4	L05912							
cAMP-dependent protein kinase type II (Ht31)	1 .	M90360							
canicular multispecific organic anion transporter (CMOAT2)		AF009670				+	+	+	
capping protein (actin filament) muscle Z-line, alpha 1 (CAPZA1)	6	U56637	В, Т		*			+	
capping protein (actin filament) muscle Z-line, alpha 2 (CAPZA2)	2	U03269	В	+	_				
capping protein (actin filament) muscle Z-line, beta (CAPZB)	1	U03271	+	+	+	+		+	

capping protein (actin filament), gelsolin-like (CAPG)	8	M94345	+	+		.+		+	
carbamoyl-phosphate synthetase 2, aspartate transcarbamylase, and	1	D78586	+	+	+	+		+	
dihydroorotase (CAD) carbonic anhydrase V,	1	L19297		+			+		
mitochondrial (CA5) carboxypeptidase D (CPD)	3	U65090	В	+	+ .	· · ·			
camitine/acylcamitine	1	Y10319		+	+	-	+		<u> </u>
translocase (CACT)							+		
Cas-Br-M (munne) ecotropic retroviral transforming sequence	2	X57110					7	,	
(cbl)		·				·			
casein kinase 1, alpha 1 (CSNK1A1)	· 1	L37042	+	+	+	+		+	
casein kinase 2, alpha 1 polypeptide (CSNK2A1)	. 2	M55265	8	+			+	+	
casein kinase I gamma 3L (CSNK1G3L)	1	AF049090.1			·		,		-
casein kinase II alpha subunit(=S72393)	1	X69951							
CASP8 and FADD-like apoptosis regulator (CFLAR)	4	AF015450		+-	+	+	+	+	111
caspase 1, apoptosis- related cysteine protease (interleukin 1, beta,		U13697	+			+			
convertase) (CASP1) caspase 10, apoptosis- related cysteine proteas (CASP10)	1	U60519	B, T activ lymph		ή		+		
caspase 3, apoptosis- related cysteine protease (CASP3)	3	U13737	В, Т	+	+	+	+		
caspase 4, apoptosis- related cysteine protease (CASP4)	6	U25804	+	+	+	+		+	
caspase 5, apoptosis- related cysteine protease (CASP5)	1	U28015			+				• .
caspase 8, apoptosis- related cysteine protease (CASP8)	2	X98173		+		+	·	+	
caspase 9, apoptosis- related cysteine protease (CASP9)	1	U56390	В			+	+		
catalase (CAT)	5	X04076	В	+	+		+		
catechol-O- methyltransferase (COMT)	1	M65213		+	+		+		
catenin (cadherin- associated protein), alpha 1 (102kD) (CTNNA1)	6	D14705		+	+				
cathelicidin antimicrobial peptide (CAMP)	1	X89658	В						
cathepsin B (CTSB)	4 .	L16510			+		+	+	
cathepsin C (CTSC)	3	U79415		+	+	+		+	
cathepsin D (lysosomal aspartyl protease) (CTSD)	4	M11233		+	+		+		
cathepsin E (CTSE)	1	J05036				L	+	_	
cathepsin G (CTSG)	1	M16117	T, W	1	+		<u> </u>	<u></u>	·
cathepsin S (CTSS)	34	M86553	B, Monocyt	e sum phom		a, I	+	+	
cathepsin W (lymphopain) (CTSW)	4	AF013611			Ŀ			+	
CBF1 interacting corepressor CIR (=U03644 recepin)	1	AF098297							

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CCAAT/enhancer binding protein (C/EBP), alpha	3	X87248		: +	+	+		+ -	
CCAAT/enhancer binding protein (C/EBP), delta (CEBPB)	1	S63168			+		+	+	
CCAAT-box-binding transcription factor (CBF2)	. 2	M37197	Tlymphoma			+	+		
CCR5 receptor (CCR5) (non-exact?)	1	AF011504							·
CD14 antigen (CD14)	11	M86511	+ .	+	+	+		+	
CD18 (=M95293)	4	X64071							
CD1C antigen, c polypeptide (CD1C)	2	M28827						+	
CD2 antigen (cytoplasmic tail)-binding protein 2 (CD2BP2)	1	AF104222						,	
CD2 antigen (p50), sheep red blood cell receptor (CD2)	4.	M14362	. <b>+</b>		+	+	-	+	
CD2 cytoplasmic tail- binding protein 1 (CD2BP1)	2	AF038602			·		+		
CD20 antigen (CD20)	1	X12530			ļ	-	_		,
CD20 receptor (S7)	1	X07203			<u> </u>			ļ	
CD22 antigen (CD22)	1	U62631	В :		<u> </u>	- 2	<u> </u>		
CD24 signal transducer	1	M58664			<u> </u>	<u> </u>	<u> </u>	<u> </u>	
CD33 antigen (gp67) (CD33)	• 1	M23197					+		
CD33 antigen-like 2; OB binding protein-2 (CD33L2) (non-exact, 68%)	. <b>1</b>								
CD33L2 (61% aa)	1	D86359					•		
CD36 antigen (collagen type I receptor, thrombospondin receptor) (CD36)	7	M98398	T lymphoma		+		+	+	
CD37 antigen (CD37)	5	X14046	+	+		+		+	·
CD38 alt	1	D84277	† <u>-</u>						
CD39 antigen (CD39)	1	U87967	В	+			+	+	
CD3D antigen, delta polypeptide (TIT3 complex) (CD3D)	1	X03934			+	+		+	
CD3E antigen, epsilon polypeptide (TIT3 complex) (CD3E)	<b>1</b>	X03884	+		٠.	+			
CD3G antigen, gamma polypeptide (TIT3 complex) (CD3G)	2	X06026	·W				+		
CD3Z antigen, zeta polypeptide (TIT3 complex) (CD3Z)	2	J04132	+			+			
CD3-zeta (clone pBS NK1)	1	X55510							
CD4 (low match)	1	. 568043							
CD4 antigen (p55) (CD4)	4	M12807		+	+		+		
CD44 antigen (homing function and Indian blood group system (CD44)	6	X56794	W				+	+	
CD48 antigen (B-cell membrane protein) (CD48)	3	X06341	+	+	+	+		+	
CD53 antigen (CD53)	10	L11670	+	+		+		+	
CD53 antigen (CD53) (low match)	1	M60871							a .
CD63 antigen (melanoma 1 antigen) (CD63)	3	M59907		<u> </u>	<u> </u>		Ļ	<u> </u>	·
CD68 antigen (CD68)	2	S57235	l	+	+		+	+	<u> </u>

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CD74 antigen (invariant polypeptide of major	72	K01144	. +	+	+	+	+	+	high in many libraries
histocompatibility complex, class II antigen-associated) (CD74)			·		,				
CD79A antigen (immunoglobulin- associated alpha) (CD79A)	2	M80462			+				
CD79B antigen (immunoglobulin- associated beta) (CD79B)	. 2	M89957	+						
CD8 antigen, alpha polypeptide (p32) (CD8A)	2	M27161	+			+	٠	+	
CD8 antigen, beta polypeptide 1 (p37)	1	X13445	W						
(CD8B1) CD81 antigen (target of	+ 1	M33680	•	+	. +			+	
antiproliferative antibody 1 (CD81)	•		*			0			
CD83 antigen (activated B lymphocytes, mmunoglobulin superfamily) (CD83)	1	Q01151	В	+	+		,	*	*
CD84 antigen (leukocyte antigen) (CD84)	1	U82988		+	+			+	
CD86 antigen	1	L25259	,	+					
CD9 antigen (p24) (CD9)	2	M38690			+		+	+	- 00
CD97 antigen (CD97)	12	X84700	+	+		+			
CD97 antigen (CD97) (noin-exact 59%)	. 1	P48960			-				
CD97 antigen (CD97) (non- exact 62%)	1	X94630	+	+		+			
CDC23 (cell division cycle 23, yeast, homolog) (CDC23)	1	AF053977		+			+	+	
CDC37 homolog	1	U63131	В	+	+		+	+	
Cdc42 effector protein 3 (CEP3)	2	AF104857	В	+	+		+		
CDC-like kinase (CLK)	1	. L29219		+	+	+	<u> </u>	+	
CDC-like kinase 2 (CLK2)	1.	AF023268	В	+	+			<u> </u>	· · · · · · · · · · · · · · · · · · ·
CDW52 antigen (CAMPATH-1 antigen) (CDW52)	13	X15183	Tactivated	+	+		+		
cell cycle progression restoration 8 protein(CPR8)	1	AF011794							
cell division cycle 10 (homologous to CDC10 of S, cerevisiae) (CDC10)	4	S72008	+	+	+	+		+	
cell division cycle 20, S.cerevisiae homolog (CDC20)	1	U05340		+	+	+			
cell division cycle 25B (CDC25B)	6	Z68092	. +	+	+	+		+	4
cell division cycle 2-like 1 (PITSLRE proteins) (CDC2L1) (non-exact 42%)	1	AF067514			·				
cell division cycle 42 (GTP- binding protein, 25kD) (CDC42)	5	M35543	+	+	+,	+		+	
cell division protein (non- exact 68%)	1	AF063015		Ŀ					
CELL-CYCLE NUCLEAR AUTOANTIGEN SG2NA (S/G2 NUCLEAR ANTIGEN)	. 1	Q13033							
centromere protein B (80kD) (CENPB)	. 1	X55039		+	1	T	+		
cep250 centrosome	3	AF022655	В	+ .			+		9

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ceroid-lipofuscinosis, neuronal 2, late infantile	7	AF017456	+	+	+	+	+	+.	high in bone
(Jansky-Bielschowsky disease) (CLN2)									
c-fgr (=M63877	6	X52206							
nonreceptor protein- tyrosine kinase (fgr))									·
ĆGI-19 protein	3	AF132953.1							
chaperonin containing	1	X74801		+	+		<del> </del>	+	
TCP1, subunit 3 (gamma) (CCT3)		,				·		_	
chaperonin containing TCP1, subunit 4 (delta) (CCT4)	1 .	AF026291	•	+	+		+	+	
Chaperonin containing TCP:1, subvnit 6A (zeta:1) (CCT6A)	4	L27706	В	+	+				
chaperonin containing TCP1, subunit 7 (eta) (CCT7)	4	AF026292	В	+	×			+	
Chediak-Higashi syndrome 1 (CHS1)	1	U67615	B, T lymphoma	+	+		+	-	·
Chediak-Higashi syndrome 1 (CHS1) (low score)	<del></del>	U67615							
chemokine (C-C motif) receptor 2 (CCR2)	.4	U03905		-		<u> </u>			
chemokine (C-C motif) receptor 4 (CCR4) (low	1.	X85740				-		<del>                                     </del>	
match) (may contain repeat)									
chemokine (C-C motif) receptor 7 (CCR7)	6	L31581							
receptor 1 (CX3CR1)	5	U20350	•	+	<u>.</u>				
chemokine (C-X-C motif), receptor 4 (fusin) (CXCR4)	5	M99293	. +	+	+	+		+	
chitinase 3-like 1 (cartilage glycoprotein-39) (CHI3L1)	2	M80927		+		+	,	+	
chitinase 3-like 2 (CHI3L2)	2	U49835		. +		+		+	
chloride channel 1 , skeletal muscle (CLCN1)	1	G18280		<u> </u>	Ĺ.				
chloride channel 6 (CLCN6)	1	D28475		+	+	<u> </u>	_	<u> </u>	
Chloride intracellular channel 1 (CLIC1)	.1	U93205	+	+	+	+		+	•
chondroitin sulfate proteoglycan 2 (versican) (CSPG2)	5 ;	X15998			+				
chondroitin sulfate proteoglycan core protein	2	J02814			+			+	
chromatin assembly factor 1 p48 subunit (CAF-1 P48	1	Q09028							
subunit) (retinoblastoma binding protein p48)	•			·				1	χ.
(retinoblastoma-binding protein 4) (MSI1 protein homolog)									
chromodomain helicase DNA binding protein 1 (CHD1)	2	AF006513					_	1	
chromodomain helicase DNA binding protein 1-like (CHD1L)	1	AF054177		•					
chromodomain helicase DNA binding protein 2 (CHD2)		AF006514	В	+	+		+		
chromodomain helicase DNA binding protein 3 (CHD3)	1	AF006515							
Chromodomain helicase DNA binding protein 4 (CHD4)	5	X86691	+	+	+	+		+	

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chromosome 1 open reading frame 7 (C1ORF7)	1	AF054176							
chromosome 1 specific transcript KIAA0493	1.	AB007962						·	
chromosome 17 open reading frame 1B (C17ORF1B)	1 .	AJ008112	· .	+	٠.				
chromosome 4 open reading frame 1 (C4ORF1)	1	AF006621		+	+	+		:+	
chromosome condensation 1-like (CHC1L)	2	AF060219		+	+ .	+		+	
chromosome X open reading frame 5 (CXORF5)	1	Y15164	. В	+	+		+		
chromosome-associated polypeptide C(CAP-C)	2	AF092564	8	+	+	·	+	+	
cig42	1,	AF026944							
cig5	3	AF026941				•			
citrate synthase (CS)	2	AF047042	В	. +	+		+	+	·
class I major	. 2	U31372	<del></del>	-				<del> </del>	
histocompatibility antigen (HLA-Cw3)	. •						,	٠.	
class I major histocompatibility antigen (HLA-Cw3) (low match)		U31372						-	
clathrin assembly protein lymphoid myeloid leukemia (CALM)	3	U45976	В	+	+.	-		+	
clathrin heavy chain	1	X55878 .				<u> </u>	_	İ	
clathrin, heavy polypeptide- like 2 (CLTCL2)	1	D21260							
clathrin, light polypeptide (Lca) (CLTA) (low match)	1	M20472						Ī.	
clathrin-	3	D63475		+	+	+	+	+	
associated/assembly/adapt or protein, medium 1 (CLAPM1)									
cleavage stimulation factor, 3' pre-RNA, subunit 2 64kD (CSTF2) (non-exact 82%)		M85085	*						
cleavage stimulation factor, 3' pre-RNA, subunit 3, 77kD (CSTF3)	1	U15782	В	+	1		+		
cik3	1	L29220	В	+	+				
clone 23815 (Hs.82845)	1	U90916		+	+		<u> </u>	+	
clone 24592 mRNA	1	D88378	+	+	+	+		+	
clo/MBL/SPA receptor	1	U94333		<del> </del>			<del>                                     </del>	-	
C1qR(p) () clusterin (complement lysis	1	M64722	+	+	+	+	+	+	
inhibitor, SP-40,40, sulfated glycoprotein 2, testosterone-repressed									
prostate message 2, apolipoprotein J) (CLU)									
CMP-sialic acid transporter (CMPST)	1	D87969	В	+	+				
CMRF35	3	X66171							
c-myc oncogene containing coxIII		X54629							
coagulation factor II (thrombin) receptor (F2R)	1	M62424		+	+	ļ		+	*
coagulation factor V (proaccelerin, labile factor) (F5)		M14335		+		+	*		
coagulation factor XIII a	3	M21998							
Spoulist			1						
coagulation factor XIII, A1 polypeptide (F13A1) coated vesicle membrane	6	M14354 X92098	+	+ ;	+	+	+	+	

coatomer protein complex,	5	U24105	. T	+	Ι		+		
subunit alpha (COPA) Cofilin 1 (non-muscle)	13	X95404	+	+	+	+	<u>.</u>	+	high in fetal brain
(CFL1)			<b>*</b>			Ľ	Ľ		nign in letai brain
cold inducible RNA-binding protein (CIRBP)	7:	D78134		+	+			+.	•
cold shock domain protein A (CSDA)	3	X95325		+	**		,		
collagen, type IX, alpha 2 (COL9A2)	3	AF019406	В						
colony stimulating factor 1 receptor, formerly McDonough feline sarcoma viral (v-fms) oncogene homolog (CSF1R)	3	X03663		+			+	+	er.
colony stimulating factor 2 receptor, beta, low-affinity (granulocyte-macrophage) (CSF2RB)	5	M59941	}						×
colony stimulating factor 2 receptor, beta, low-affinity (granulocyte-macrophage) (CSF2RB) (low match)	1	M59941							
colony stimulating factor 3 receptor (granulocyte) (CSF3R)	16	X55720		+					
complement component 5 receptor 1 (C5a ligand) (C5R1)	1	M62505	L			·			4
conserved gene amplified in osteosarcoma (OS4)	2	AF000152		+	+	+		+	*
COP9 (constitutive photomorphogenic, Arabidopsis, homolog) subunit 3 (COPS3)	2	AF031647		+	+				
COP9 homolog (HCOP9)	2	U51205	В	+	+	+	+	+	
COPII protein, homolog of s. cerevisiae SEC23p (SEC23A)	4	X97064		+	+				
copine I (CPNE1)	2	U83246	В	+	+		+		
copine I (CPNE1) (low score)	1	U83246							·
coproporphyrinogen oxidase (coproporphyria, harderoporphyria) (CPO)	1	D16611			+		+	+	
core-binding factor, beta subunit (CBFB)	1	L20298		+					
coronin	22	X89109	T, W	+	+		+		
coronin (low match)	1	U34690							
coronin (non-exact, 71%) cot (cancer Osaka thyroid)	1	X89109 D14497	<del> </del>	-	+	+	-	+	
oncogene (COT)	<u>'</u>	D84657		· ·	+	Ľ	_	Ļ	
(photolyase-like) (CRY1)	·			<u> </u>		Ļ	<u> </u>		
CTD (carboxy-terminal domain, RNA polymerase II, polypeptide A) phosphatase, subunit 1 (CTDP1)	1	AF081287		+	+	+		+	
C-terminal binding protein 1 (CTBP1)	<u> </u>	U37408	В.	+.	+		+		
C-terminal binding protein 2 (CTBP2)	. 2	AF016507		+	+		+	$\vdash$	· · · · · · · · · · · · · · · · · · ·
CUG triplet repeat, RNA- binding protein 1 (CUGBP1)	3	U63289	1	+.	+	+		+	
cullin 1 (CUL1)	3	U58087		+	+	+		+	
cullin 3 (CUL3)	2	U58089		+	+	+		+	
cut (Drosophila)-like 1 (CCAAT displacement protein) (CUTL1)	1 -	M74099	В	+					

			•						
cyclin D2 (CCND2)	- 2	D13639		+	+	+		+	
cyclin D3 (CCND3)	5	M92287	B, T lymphoma		• +		+	·	
cyclin G1 (CNNG1)	1	D78341	В	+	+			+	
cyclin I	3	D50310	В	+			+		
cyclin T2 (CNNT2)	1	AF048732	B, T lymphoma	В					
cyclin-dependent kinase 2 (CDK2)		X62071		•					
cyclin-dependent kinase inhibitor (p27Kip1)	1	S76986					·		
cyclin-dependent kinase inhibitor 1A (p21, Cip1) (CDKN1A)	. 2 .	S67388	+	+	+	+	. <b>+</b> }	+	
CYP2D7-CYP2D6 intergenic region (partial)	1	X90926							
cystatin B (stefin B) (CSTB)	1	L03558			+		+	+	
cysteine and glycine-rich protein 3 (cardiac LIM protein) (CSRP3)	5	L54057			+	*			
cytidine deaminase (CDA)	2	L27943	i				+		
cytochrome b	1	AF042500			<del>                                     </del>	T	<del>                                     </del>		
cytochrome b (CYTB) (isolate Aus5)	1 .	AF042518							
cytochrome b(-245) beta chain N-terminal region (X- linked granulomatous disease gene)		X05895							
cytochrome b-245, beta polypeptide (chronic granulomatous disease)	2	X04011	+			+		+	
(CYBB) cytochrome C	1	P00001				<u> </u>	_	-	
cytochrome c oxidase	1	U90915	<del> </del>	+	+	┼-	+	+	· · · · · · · · · · · · · · · · · · ·
subunit IV (COX4) cytochrome c oxidase	2	M59250		Ľ.		ļ	+		
subunit Vb (COX5B)	6	AB007618	•	+	+	+		+	
subunit VII-related protein (COX7RP)		AB007616							
cytokine suppressive anti- inflammatory drug binding protein 1 (p38 MAP kinase) (CSBP1)	, I <b>1</b>	L35263	lymphocyte	•	+		+		
Cytoplasmic antiproteinase=38 kda intracellular serine	1	S69272			+				
proteinase inhibitor		-	<b>!</b>	<u>.</u>		1		<u> </u>	
cytotoxic granule- associated RNA-binding	1,	S70114	• 1						
protein p40-TIA-1 D123 (D123)		D14878	+	+		+	$\vdash$	+	
D2-2	1	AF019226	<del></del>	<u> </u>	-	$\vdash$	├	┼	
D38	<del></del>	X74802	-		-	+-	-	$\vdash$	
damage-specific DNA binding protein 1 (127kD)	2	AJ002955	+	+	+	+	+	+	
(DDB1) DCHT (low match)	1	AF017635			<u> </u>	<u> </u>	_	├-	
DEAD/H (Asp-Glu-Ala- Asp/His) box binding protein 1 (DDXBP1)	1	U78524		. +	+	+	+	+	
DEAD/H (Asp-Glu-Ala- Asp/His) box polypeptide (72KD) (P72)	2	U59321		+	+		+.	+	
DEAD/H (Asp-Glu-Ala- Asp/His) box polypeptide 1 (DDX1)	1	X70649		+	+		×	1	

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DEAD/H (Asp-Glu-Ala- Asp/His) box polypeptide 15 (DDX15)	2	AB001636						٠	
DEAD/H (Asp-Glu-Ala- Asp/His) box polypeptide 16 (DDX16)	2	AB011149	+	- +	+	+		+	
DEAD/H (Asp-Glu-Ala- Asp/His) box polypeptide 3 (DDX3)	3	U50553	+	+	+	.+		+	
DEAD/H (Asp-Glu-Ala- Asp/His) box polypeptide 5 (RNA helicase, 68kD)	37	X15729	+	+	+	.+		+	
(DDX5) DEAD/H (Asp-Glu-Ala- Asp/His) box polypeptide 5 (RNA helicase, 68kD)	1	AF015812	<u>.</u>						
(Dビス5) (low match) DEAD/H (Asp-Glu-Ala- Asp/His) box polypeptide 6	2	D17532	+	+					
(RNA helicase, 54kD) (DDX6) DEAD/H (Asp-Glu-Ala-	1	D50487		+	+-	+		+	·
Asp/His) box polypeptide 8 (RNA helicase, 54kD) (DDX8)					*				
DEAD/H (Asp-Glu-Ala- Asp/His) box polypeptide 9 (RNA helicase A, nuclear DNA helicase II;	3	L13848	+	+	+	+		+	
leukophysin) (DDX9) DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide.	1	AF000985		+ .	+		+	<u>                                     </u>	
Y chromosome (DBY) Death associated protein 3 (DAP3)	2	X83544	+	+	+	+	+	+	
death effector domain- containing protein (DEDD)	1	AF083236		+	+	+		+	
death-associated protein 6 (DAXX) dedicator of cyto-kinesis 2	2	AF039136 D86964	+	+	+	+.	_	+.	
(DOCK2) defender against cell death	1	D15057	_		+	_	+	+	
1 (DAD1) Defensin, alpha 1, myeloid-	4	L12690				+	+	+	
related sequence (DÉFA1) DEK gene (D6S231E)	1	X64229	В .		+	$\vdash$	+	-	·
delta sleep inducing peptide, immunoreactor (DSIPI)	4	250781	+	+	+	+		+	·
dendritic cell protein (GA17)	3	AF064603	+	+	+	+		+	
deoxycytidine kinase (DCK)	3	M60527 AB004574	-						<u>.</u>
lysosomal (DNASE2)	2	L77566		+	<u> </u>				
diacylglycerol kinase	3	D16440	<del> </del>			<del>                                     </del>	1		
diacylglycerol kinase alpha	3	AF064771	<del> </del>	+		$\vdash$	-	-	
(DAGK1) (clone 24) diacylglycerol kinase alpha (DAGK1) (clone 24) (low match)	1	AF064771					<u> </u>		
diaphánous (Drosophila, homolog) 1 (DIAPH1)	1	AF051782	B, monocyte stimulated	+	+		+	+	X
diaphorase (NADH) (cytochrome b-5 reductase) (DIA1)		Y09501	+	+	+	+	+	+	
differentiated Embryo Chondrocyte expressed gene 1 (DEC1)	1	AB004066		+			+	+	

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differentiated Embryo	1	AB004066	10	Π.		· ·		<u> </u>	T
Chondrocyte expressed				' '		`			
gene 1 (DEC1) (low match) differentiation antigen		100745		<u> </u>	·	<u> </u>			
ICD20	1	L23415					ĺ	İ	
DiGeorge syndrome critical	1	X84076	· · · · ·	+	+	╁	<del>                                     </del>	+	
region gene 2 (DGCR2)				ľ	1				
dihydrolipoamide	2	J03620	7	+			+	+	
dehydrogenase (E3	-		1	1	1				
component of pyruvate dehydrogenase complex,		1		l			١.		
2-oxo-glutarate complex,		1 . '		1				,	
branched chain keto acid			ŀ	1					
dehydrogenase complex)								ŀ	*
(DLD)			<u> </u>			<u> </u>	L		<u> </u>
dihydrolipoamide S- acetyltransferase (E2	-1	Y00978	В	<b> </b> +		١.	+.	1	
component of pyruvate									
dehydrogenase complex)		1		ł	l	İ			
(DLAT)	·			ł				1	
dihydropyrimidinase-like 2	1	D78013		+	+		+	+	
(DPYSL2)		Vane	·	<u> </u>	<u> </u>	<u> </u>	L.	ļ_	
dinG gene	1	Y10571	<u> </u>			<u> </u>		$oxed{oxed}$	
dipthena toxin resistance protein required for	3	AF053003	В	+	+		+	+	
diphthamide biosynthesis							1		
(Saccharomyces)-like 2		1		1	1		1	1	
(DPH2L2)							1		
disintegrin-protease (non-	1	Y13323						İ	i i
exact 72%) DJ-1 protein		XF-802020			<u> </u>	Ļ.,		<u> </u>	
1	2	AF021819	+	+	+	+		+	
Dmx-like 1 (DMXL1)	~ 1	AJ005821	+		+	+		Ī	
DNA (cytosine-5-)-	3	X63692	Tactivated,	+		<u> </u>	+	+	
methyltransferase 1 (DNMT1)		·	lymphoma			ļ.	1	l	
DNA fragmentation factor,	1	AF064019	ļ			—	<u> </u>		
40 kD, beta subunit (DFFB)		Ar004019	i .			ļ		١.	
DNA fragmentation factor,	2	U91985	T-1	+	+	<del>                                     </del>	<del>                                     </del>	+	
45 kD, alpha subunit		I				ł			į .
(DFFA)						<u> </u>	Ŀ	<u> </u>	· ·
DNA mismatch repair protein (hMLH1)	1	U17840			٠.	1		l	
DNA segment on	3	M64241		+	+	+	+	+	high in many libraries
chromosome X (unique)	J	11104241			•	`	'	Ι΄.	Ingri in many ilbranes
648 expressed sequence	•								
DNA segment, single copy	3	M73547		+	+	+		+	
probe LNS-CAI/LNS-CAII (deleted in polyposis					•			]	
(D5S346)								l	
DNA-damage-inducible		L24498	·	-		<del> </del>	├─	-	
transcript 1 (DDIT1) (low		1	1		0		ſ		
match)		[	·				l		
DnaJ protein	1	AJ001309							,
DnaJ protein	1	AJ001309	·						
docking protein 2, 56kD	1	AF034970	<del> </del>	<del>                                     </del>			<del>                                     </del>		<del> </del>
(DOK2)			<u> </u>	L		L	L	L	
dolichyl-	1	D89060	+	+	+	+	+	+	activated T cell
diphosphooligosaccharide- protein glycosyltransferase		٠.	ĺ	<b>!</b>				1	,
(DDOST)	•					١. ١			
dolichyl-phosphate	1	D86198	Tactivated	+	+	-	+	-	
mannosyltransferase	,								
polypeptide 1, catalytic						·		١.	
subunit (DPM1)							L	<u> </u>	·
down-regulated by activation (immunoglobulin	1	AJ223183				1	+	l	
superfamily) (DORA)			1						20
down-regulated in	1	P40879						-	<del> </del>
adenoma DRA (low match)									
D-type cyclin-interacting	1	AF082569	В				+	+	
protein 1 (DIP1)	·					L	L	<u> </u>	<u> </u>

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dual specificity phosphatase 1 (DUSP1)	4	X68277	, +	+	+	+	+	+.	
dual specificity phosphatase 11 (RNA/RNP	1 .	AF023917	+	+	+	+		+	
complex 1-interacting)									,
dual specificity	1	L05147		+	.+		+	+	
phosphatase 3 (vaccinia virus phosphatase VH1-related) (DUSP3)			:.						
dual specificity phosphatase 6 (DUSP6)	- 6	X93920	. +	+.	+.	+	+	+	
dynactin 1 (p150, Glued ((Drosophila) homolog)	3	X98801		··					
(DYTN1)		X98801	В	+	. +	_	<u> </u>		
dynactin 1 (p150, Glued (Drosophila) homolog) (DYTN1) (low match)	1 ,	X90001	В	} ,					÷
dynamin 2 (DNM2)	1	L36983						)	
dynamitin (dynactin	1	U50733							
complex 50 kD subunit) (DCTN-50) (non-exact 88%)					٠.				
dynein, axonemal, heavy polypeptide 17-like (non- exact, 57%aa)	1	X99947							
dynein, cytoplasmic, light	1.	AF035812	. В.	+	+	·		+	
intermediate polypeptide 2 (DNCLI2)	1.00				<u> </u>		L.	_	
dynein, cytoplasmic, light intermediate polypeptide 2 (DNCLI2) (non-exact, 69%)	1	AF035812				. [			
dyskeratosis congenita 1, dyskerin (DKC1)	1	U59151	В	+			+	+	
dystonia 1, torsion (autosomal dominant) (DYT1)	1	AF007871		+	+	+		+	
dystrobrevin, beta (DTNB)	1	AF022728		+	-			<u> </u>	
dystrophia myotonica- containing WD repeat motif (DMWD)	1	L19267	9	+	+		gŧ	+	
dystrophia myotonica- protein kinase (DMPK)	1	L08835	+	+	+			+	
dystrophin (muscular	, <b>1</b>	X14298							
dystrophy, Duchenne and Becker types) (DMD) (low match, 59%aa)	*								
E1B-55kDa-associated protein	1	AJ007509	W	+	+		+	+	·
E2F transcription factor 3 (E2F3)	2	D38550	•	+	+	+	+	+	
E2F transcription factor 4, p107/p130-binding (E2F4)	1 .	X86096	В	+			+		
E2F transcription factor 5, p130-binding (E2F5)	2	U15642	+	+		+		+	
E74-like factor 1 (ets domain transcription factor) (ELF1)	1	M82882	В		+		+	+	*
E74-like factor 4 (ets domain transcription factor) (ELF4)	3	U32645		+	+			+	
E74-like factor 4 (ets domain transcription factor)	1	U32645		Ť					4
(ELF4) (non-exact, 71%) early development regulator 2 (homolog of	4	U89278	+	+	+	+		+	
polyhomeotic 2) (EDR2) EBV induced G-protein	1	L08177	<del>  w</del>	-	$\vdash$	$\vdash$	-	$\vdash$	
coupled receptor (EBI2) ecotropic viral integration	3	M60830		+	-	+	+	-	
site 2B (EVI2B)			<u> </u>			Щ.	1		<u> </u>

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ectin, galactoside-binding, soluble, 1 (galectin 1)	. 1	J04456	*					+	
(LGAL\$1) EGF-like-domain, multiple 4 (EGFL4)	1	AB011541							
elF-2-associated p67	3	U13261	В	+				+	(1)
elastin (supravalvular aortic stenosis, Williams-Beuren syndrome) (ELN) (low match)	1	M24782		+	+	÷			
elav-type RNA-binding protein (ETR-3)	3	U69546							
electron-transfer- flavoprotein, alpha polypeptide (glutaric aciduna II) (ETFA)	2	J04058		+				-	ý.
ELK3, ETS-domain protein (SRF accessory protein 2) (ELK3)	2	236715			+			+	
elongation factor 1-beta	1	L26404					7		
elongation factor Ts (mitochondrial protein)	1	AF110399							
elongation factor Tu- nuclear encoded mitochondrial	1	X84694		•					3)
eMDC II protein	1	AJ242015.1		<u> </u>					·
ems1 sequence (mammary tumor and squamous cell	1	M98343		+	+		+	+	
carcinoma-associated (p80/85 src substrate) (EMS1)					٠				
endogenous retroviral element HC2	1	Z70664							
endosulfine alpha (ENSA)	1	X99906	Ţ	+					
endothelial differentiation, sphingolipid G-protein- coupled receptor, 1 (EDG1)	2	M31210		+	+	*		+	
endothelial differentiation, sphingolipid G-protein- coupled receptor, 1 (EDG1) (low match 66%)	. 1	M31210	*						
endothelial monocyte- activating polypeptide (EMAPII)	. 1	U10117	+	+	+	+	·	+	
enolase 1, (alpha) (ENO1)	12	M14328	+	+	+	+	+	+	
enolase 2, (gamma, neuronal) (ENO2)	1	X51956		+					
enolase-alpha		D28437							
enoyl Coenzyme A hydratase 1, peroxisomal (ECH1)	2	U16660							
enoyl Coenzyme A hydratase, short chain, 1, mitochondrial (ECHS1)	1	D13900	+	+	+	+	+	+	
ENOYL-COA HYDRATASE, MITOCHONDRIAL PRECURSOR (SHORT CHAIN ENOYL-COA	1	P30084			··				
HYDRATASE) (SCEH) (ENOYL-COA HYDRATASE 1) (low match, non-exact 56%)							•		
epidermal growth factor receptor pathway substrate 15 (EPS15)	2	U077 <b>0</b> 7	٠.	+		+		+	

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EPIDIDYMAL SECRETORY PROTEIN E1 PRECURSOR (EPI-1)	2	Q15668							
(HE1) (EPIDIDYMÀL SECRETORY PROTEIN									
14.6) (ESP14.6) epithelial membrane protein 3 (EM[P3)	.1	U87947	+	+	.+	+		+	
Epoxide hydrolase 1, microsomal (xenobiotic)	1	L29766		*					+ only
(EPHX1)  ERCC2 (=L47234)	1	X52221	<del></del>	╁╌┧		H		-	
ERF-2	3	U07802	+	+ +	+	+		+	high in gall bladder
ERp28 protein	<del>1</del>	X94910	+	++	+	+		+.	
erythrocyte membrane	2	M81635		- 1	,				
erythroleukemic cells K562	2	L25343							
EST (Hs.189509)	2	U24166							
estrogen receptor-related protein (hERRa1)	1	L38487							·
ESTS, Highly similar to ADENYLOSUCCINATE SYNTHETASE	. 1	X66503	. В, Т	+	+				
ESTs, Moderately similar to cysteine-rich fibroblast growth factor receptor	1	· U28811	+	+	. +			+	
ET binding factor 1 (SBF1)	1	U93181	+	+				+	
ets domain protein ERF	1	U15655	+	+	+	+		+	
eukaryotic translation elongation factor 1 alpha 1 (EEF1A1)	326	X03558		+	+			+	
eukaryotic translation elongation factor 1 alpha 1 (EEF1A1) (low match)	1	X03558							
eukaryotic translation elongation factor 1 alpha 1 (EEF1A1) (low match)	1 .	X03558	,				4		
eukaryotic translation elongation factor 1 beta 2 (EEF1B2)	5	X60489	+	+	+	+		+	-
eukaryotic translation elongation factor 1 delta	1	Z21507	+	+	+	+	+	+	
(guanine nucleotide exchange protein) (EEF1D)			•			<u> </u>		<u> </u>	
eukaryotic translation elongation factor 1 gamma (EEF1G)	31	Z11531							
eukaryotic translation elongation factor 2 (EEF2)	2	X51466		+				+	
eukaryotic translation initiation factor 2, subunit 1 (alpha, 35kD) (EIF2S1)	- ,1	J02645							
eukaryotic translation initiation factor 2, subunit 2 (beta, 38kD) (EIF2S2)	1	M29536	*						
eukaryotic translation initiation factor 2, subunit 3 (gamma, 52kD) (EIF2S3)	3	L19161		+	+				
eukaryotic translation initiation factor 3, subunit 10 (theta, 150/170kD) (EIF3S10)	2	U78311							
eukaryotic translation initiation factor 3, subunit 2 (beta, 36kD) (EIF3S2)	3	U36764	+	+	+	+	+	+	high in white blood cells
eukaryotic translation initiation factor 3, subunit 3 (gamma, 40kD) (EIF3S3)	6	U54559 <sub>.</sub>	+	+	+	+		+	high in spleen
eukaryotic translation initiation factor 3, subunit 4 (delta, 44kD) (EIF3S4)	9	AF020833		+	+	+		+	

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eukaryotic translation initiation factor 3, subunit 6 (48kD) (EIF3S6)	4	U94175	+	+	+	+		+	high in bladder
eukaryotic translation initiation factor 3, subunit 6 (EIF3S6)	*	U62962		+	+	+		+	Highly represented (1.4833 pct) in library 36 human gall bladder
eukaryotic translation initiation factor 3, subunit 7 (zeta, 66/67kD) (EIF3S7)	3 3	U54558	+	+	+	+		+	
eukaryotic translation initiation factor 3, subunit 8, 110KD (EIF3S8)	5	U46025	+	+	+	+	+	+ .	high in testis
eukaryotic translation initiation factor 4 gamma, 1 (EIF4G)	_	AF012088						·	
eukaryotic translation initiation factor 4 gamma, 1 (EIF4G) (low match)	1	AF012088			·				
eukaryotic translation initiation factor 4 gamma, 1 (EIF4G1)	2	D12686						٠	
eukaryotic translation initiation factor 4 gamma, 2 (EIF4G2)	6	U73824	+	+	+	+	+	+	
eukaryotic translation initiation factor 4 gamma, 2 (EIFG2)	2	U76111	+	+	+	+	+	+	
eukaryotic translation initiation factor 4A, isoform 1 (EIF4A1)	29	D13748							
eukaryotic translation initiation factor 4A, isoform 2 (EIF4A2)	11	D30655	+	+	+	+	+	+	
eukaryotic translation initiation factor 4B (EIF4B) eukaryotic translation	18	X55733	*	+	+	+		+	
initiation factor 4E (EIF4E) Eukaryotic translation	3	L36056	Т, В	-		_	+	+	
initiation factor 4E binding protein 2 (EIF4EBP2)									
eukaryotic translation initiation factor 4H (EIF4H)	2	Q15056		·	+				
eukaryotic translation initiation factor 5 (EIF5)	. 2	U49436	+	+		+	+	+	
eukaryotic translation termination factor 1 (ETF1)	2	U90176	+	. +	+	+		+	
EV12 protein	1	M55266		+				<u>L</u>	<u> </u>
Ewing sarcoma breakpoint region 1 (EWSR1)	1	X66899	+	+	+	+		+	•
EWS/FLI1 activated transcript 2 homolog (EAT-2)	2	AF020264							
EWS-E1A-F chimeno	1	U35622	•						
excision repair cross- complementing rodent repair deficiency,	1	M28650	+	+	+	+		+	
complementation group 1 (includes overlapping antisense sequence) (ERCC1)			-						
excision repair cross- complementing rodent repair deficiency,	1	X69978		+	+.	+		+	
complementation group 5 (xeroderma pigmentosum, complementation group G (Cockayne syndrome))	÷.		9						
(ERCC5) exostoses (multiple)-like 3	1	AF001690		+	+.	+		+	
(EXTL3)	1	X77744		-		+		<u> </u>	
		L	1	1	L			L	<u> </u>

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F1-ATPase beta subunit (F-1 beta)	2	X03559						·	
Fanconi anaemia group A	2	Z83095							
Fanconi anemia, complementation group A (FANCA)	1 .	X99 <b>226</b>	+	+	+	.+	-		
far upstream element (FUSE) binding protein 1 (FUBP1)	2	U05040	+		+		·	+	
farnesyl diphosphate synthase (farnesyl pyrophosphate synthetase, dimethylallyltra nstransferase, geranyltranstransferase) (FDPS)	1	J05262	+	+	+	+	-	+	
farnesyl-diphosphate farnesyltransferase 1 (FDFT1)	2	X69141	+	,+	+	+	+	+	
farnesyltransferase, CAAX box, beta (FNTB)	2	L00635		+	+				·
Fas ligand (gene and promoter region)	1	AF044583							
Fas-ligand associated factor 1	1	U70667							
fatty-acid-Coenzyme A ligase, long-chain 1 (FACL1)	4	D10040	+	+		+	+	*	
Fc fragment of IgA, receptor for (FCAR)	1	X54150							
Fc fragment of IgE, high affinity I, receptor for, gamma polypeptide (FCER1G)	1	M33195	+ -	+	+	+		+	
Fc fragment of IgE, low affinity II, receptor for (CD23A) (FCER2)	2	X04772	+	+					
Fc fragment of IgG, low affinity IIa, receptor for (CD32)	6 .	M31932	+	+	+	+	+	+	
Fc fragment of IgG, low affinity IIa, receptor for (CD32) (FCGR2A)	1.	X62572	+	+	+	+	+	+	
Fc fragment of IgG, low affinity Illa, receptor for (CD16) (FCGR3A)	34	X07934	+	+	+	+		+	
Fc fragment of IgG, receptor, transporter, alpha (FCGRT)	3	U12255		+	+	+	+	+	high in many libraries
ic-tgr	1	Z13983							
Fc-gamma-receptorIIIB (FCGR3B)	2	M90746							
feline sarcoma (Snyder- Theilen) viral (v- fes)/Fujinami avian sarcoma (PRCII) viral (v- fps) oncogene	3	X06292							
homolog(FES) c-fes/fps) female sterile homeotic- related gene 1 (mouse homolog) (FSRG1)	2	X96670	+	+	+	+		+	
ferritin L-chain	9	Y09188							
ferritin, heavy polypeptide 1 (FTH1)	4	M11146	+	+	+	+	+	+	
fertilin alpha pseudogene	1	Y09232		+			_		
fetal Alzheimer antigen (FALZ) fetal Ig heavy chain	2	U05237 M34024		<u> </u>	<u> </u>	_	<u> </u>		
variable region			+	+	+	+	+	+	
fibrillarin (FBL) fibrinogen-like protein 2	3 .	X56597 Z36531	ļ <u> </u>	<del>  </del>	<u> </u>	+	┵	Ψ,	<u> </u>
(T49)	. J.			<u> </u>	<u> </u>	<u>L</u>			<u> </u>
			42						

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fibroblast growth factor		M35718	+	+	+	+ ·	+	+	
receptor 2 (bacteria-	•	•							
expressed kinase.						1 1		i .	
keratinocyte growth factor	٠.				ŀ			1	
receptor, craniofacial								1	
dysostosis 1, Crouzon	· ·						i !	l	
syndrome) syndrome,				'					
Pfeiffer syndrome,	, lies							ľ	<b>.</b>
Jackson-Weiss) (FGFR2)	100					Ш			<u> </u>
ficolin (collagen/fibrinogen	19	D83920				+		+	
domain-containing) 1			ł	i			i '	1.	•
(FCN1)		•		<u> </u>	<u> </u>			<u>.</u>	
filamin A, alpha (actin-	. 2	X53416							
binding protein-280)	1			1		'	'		
(FLNA)	1		l	1		1 1	1		
filamin B, beta (actin-	1.	AF043045		+	+		+		
binding protein-278)	<b>i</b> , .	·	i		197	١. ا		ł	
(FLNB)				1	'		1		
Finkel-Biskis-Reilly munne	2	X65923	.+	+	+	+	+	+	Highly represented in
sarcoma virus (FBR-MuSV)				1	i i				intraepithelial
ubiquitously expressed (fox				1	١. ١			l	neoplasia and
derived); ribosomal protein				1			- 1	1	invasive prostate
S30 (FÁU)	1			1			l		tumor
FK-506 binding protein	1	M80199	+	+	+	+		+	T
		M34539		+	—	$\vdash$	├—	₩	<del>                                     </del>
FK506-binding protein 1A	2 :	M34539	l	1	1 .			1	1
(12kD) (FKBP1A)	<del></del>	UAN TAN	<b></b>	₩.	<del> </del>	<del> </del>		<del></del>	
FK506-binding protein 1B	1	M92423		+	ł	+	1	+	
(12.6 kD) (FKBP1B)	1	1		ــــــــــــــــــــــــــــــــــــــ	ļ	اــــــــــــــــــــــــــــــــــــ	<u> </u>	₩.	·
FK506-binding protein 5	4	U71321		+	+	+	1	+	9
(FKBP5)				<u> </u>			<u> </u>		
Flightless I (Drosophila)	3	U80184		+					
homolog (FLII)		1 :	, i	1	İ	]	1		
Flightless I (Drosophila)	. 1	U80184		1	·				
homolog (FLII) (low match)	İ			1	i				
FLN29 (FLN29)	2	AB007447		+		+	$\vdash$	+	
· · · ·	1		<b></b>	<del> </del>	<del>                                     </del>	<del> </del>	+	<del> </del>	
flotillin 2 (FLOT2)	. 5	M60922	+	+	*	+	+	+	
folate receptor 2 (fetal)	1.	AF000380		+	+	+		+	
(FOLR2)				1	ì			1	
forkhead (Drosophila)	. 1	AF032886	+ .	+		+		+	
homolog	,			1			Ι.		
(mabdomyosarcoma) like 1	]			1	1		Ι,		
(FKHRL1)			<b>!</b>	1		1	1		· ·
Formyl peptide receptor 1.	. 9	M60627	+	++	+	+	<del>                                     </del>	+	
(FPR1)			1		1				
formyl peptide receptor-like	11	M84562		+	┼	┼─	$\vdash$	$\vdash$	Found only in
1 (FPRL1)	'	10104002		1		l	1	1	libraries from
I (FERLI)				1	l		1		placenta
formyl peptide receptor-like	1	M84562	<del> </del>	+	<del></del>	<del> </del>	+	+	F
14 (EDDI 4) (four secto)	1 '	1VIO-450Z	1	1	Ι.			1	
1 (FPRL1) (low score)	<del>                                     </del>	1 20072	<del></del>	+	+	+	<del></del>	+	<del>                                     </del>
fragile X mental retardation	1	L29074	†     †	1	1	*	l	•	
1 (FMR1)	<u> </u>	·	<del></del>	+	<del> </del>	<del>↓</del>	<del> </del> —	₩	<u> </u>
fragile X mental	1 1 .	U25165	† †	+	+	+		1	
retardation, autosomal	1			1		1	l	1	
homolog 1 (FXR1)	L		L		↓	ــــــ	<u> </u>	ـــــ	
Friend leukemia virus	3	. M93255	+	+	1	1			
integration 1 (FLI1)	L	·		1	1:	1.		<u> </u>	
fructose-bisphosphatase 1	1	D26054			I	+	Π	+	
(FBP1)		1	I	1	1	i	1	L	<u> </u>
FSHD-associated repeat	1	U85056		T	T	T	Г	П	
DNA, proximal region		1		1			1	1	l
fucose-1-phosphate	1	AF017445		+	+	+	$\overline{}$		
quanylyltransferase	1		1	1.		1	Ι.	1	
(FPGT)	[ ·		1	ľ	]	· ·	1	1	
full length insert cDNA	1	AF086122		+	<del>                                     </del>	<del> </del>	<del>                                     </del>	$\vdash$	
Iclone ZA78A09		711 000122	1	1	1	1	i	1	
full length insert cDNA	1	AF075061	<del> </del>	+	<del>+</del>	+-	<del>  -</del>	+-	
		VI 012001		1			1	1	1.
YP07G10 Iumarate hydratase (FH)	1			1	L	<u> </u>	₩	<b>↓</b>	
	1	HENZAN	<del></del>	1 3	1				
•	1	U59309		+	+	+	L	+	·
	1	U59309 X99006		+	+	+	├	┼	<del></del>
FUS (low match)	1	X99006			+			Ė	
	1			+	+	+		+	

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G alpha interacting protein (GAIP) (low score)	1,	X91809						·	
G protein beta subunit-like protein 12.3	2	D28398		ŀ					
G protein-coupled receptor 64 (HE6) (non-exact 59%)	1	X81892				+			
G protein-coupled receptor kinase 6 (GPRK6)	2	L16862	+	+	+	• •	-	. +	
G1 to S phase transition 1 (GSPT1)	2	X17644	٠.	+.	+	+	.+	+	*
GA-binding protein	1	D13316		+	+	+ .	1+	+	
subunit 2 (47kD) (GABPB2) galactose-1-phosphate	2	M60091							
uridylyltransferase (GALT)	3	. ₁₩27508	:	.+ .			Ŧ	-	
(GLB1) galactosyltransferase	1	M13701				_			
(=X13223 N- acetylglucosamide-(beta 1- 4)-galactosyltransferase)									
galectin-9 isoform	1	AB006782	+			+		+	•
gamma2-adaptin (G2AD)	. 1	AF068706	+	+		+ ;		+	
gamma-actin	2	M37130			Ŀ				·
gamma-aminobutyric acid (GABA) B receptor 1 (GABBR1)	2	AJ012187		+	+	÷		+	
GATA-binding protein 2 (GATA2)	. 1	M68891				+		+	
GATA-binding protein 3 (GATA3)	1	M69106			+	+		+	
GCN5 (general control of amino-acid synthesis,	. 3	D64007	+	+	+	+		+	
yeast, homolog)-like 1 (GCN5L1)	1	D45021	+	-	+	+	_	+	high in adult brain
GDP dissociation inhibitor 1 (GDI1) GDP dissociation inhibitor	4	Y13286		<u> </u>		ļ. 	_	Ŀ	Ingrim don't brain
2 (GCI2)	4	U68142	+	+	+	+		+	
GDS-related protein (HKE1.5)	3	X04412	<u> </u>	, ·	<u>,</u>	+	+	Ļ	
gelsolin (amyloidosis, Finnish type) (GSN)	3	Y14946	+	+	<u>'</u>	Ļ	Ļ	Ļ	
general transcription factor ii, I (GTF2I)					<u>*</u>	Ļ	+	+	high in fetal brain
general transcription factor II, i, pseudogene 1 (GTF2IP1)	. 1	AF038968	+	+	Ť				Ingir in letar brain
general transcription factor IIF, polypeptide 1 (74kD subunit) (GTF2F1)	4	X64037	+	] +	+	+		+	
general transcription factor IIH, polypeptide 3 (34kD subunit) (GTF2H3)	2	Z30093	B, T						
general transcription factor IIH, polypeptide 4 (52kD	3	Y07595		+		+		+	
subunit) (GTF2H4) general transcription factor	1	U14134 -	+	+		+		+	
general transcription factor	1	U02619		+.		+	T		
subunit, 220kD ) (GTF3C1) general transcription factor IIIC, polypeptide 2 (beta	3 .	D13636	+	+	+	+	+	+	
subunit, 110kD) (GTF3C2) germline immunoglobulin	1	L06612		-			$\vdash$	$\vdash$	
heavy chain (IGHV@) germline immunoglobulin	1	X92236		+			$\vdash$	1	
heavy chain, variabl region germline immunoglobulin heavy chain, variable	1	X92343		-		<u> </u>	$\vdash$		
region, (21-2)	<u> </u>		<u></u>			1_			<u>l</u>

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GLE1 (yeast homolog)-like, RNA export mediator (GLE1L)	1	AF058922		-+	+				
glia maturation factor, beta (GMFB)	1	AB001106	+	+		+		+	
glioma-associated oncogene homolog (zinc finger protein) (GLI)	1	X07384							
glioma-associated oncogene homolog (zinc finger protein) (GLI) (low	1	X07384							
score)		V00516							
globin, alpha 2	. 1 .	M32284		<b>_</b>	<u> </u>	<u> </u>			
glucocorticoid receptor (=M69104)	1		!		<u> </u>	<u> </u>			
glucocorticoid receptor (GRL)	2	U80947	†	+	+	+		. +	
glucos phosphate isomerase (CONTAINS LARGE REPEAT)	1	L09105				·			
glucosamine (N-acetyl)-6- sulfatase (Sanfilippo disease IIID) (GNS)	1	Z12173	+				-	-	
glucosamine (N-acetyl)-6- sulfatase (Sanfilippo disease IIID) (GNS) (non-	1	Z12173							
exact 56%) glucose transporter-like	1	M20681	<b></b>	+	+	+	+	+	
protein-III (GLUT3)									
glucose transporter-like protein-III (GLUT3) (low match)	1	M20681	)		·				
glucosidase, alpha; acid (Pompe disease, glycogen storage disease type II) (GAA)	1	Y00839	+	+		*			
glucosidase, beta; acid (includes glucosylceramidase) (GBA)	1	K02920	+.	+	+	+		+	
glutamate dehydrogenase 1 (GLUD1)	1	M20867		+	+	+	+.	+	
glutamate-ammonia ligase (glutamine synthase) (GLUL)	. 12	X59834	+	+	+	+	·	.+	
glutamate-ammonia ligase (glutamine synthase) (GLUL) (low score)	1	Y00387							
glutamate-cysteine ligase (gamma-glutamylcysteine synthetase), catalytic	1	M90656			,	+			
(72.8kD) (GLCLC) glutamine cyclotransferase	1	X71125	<u> </u>	+	+		十一		. ,.
glutamine-fructose-6- phosphate transaminase 1 (GFPT1)	1	M90516		+		+			
glutaminyl-tRNA synthetase	1	X72396			-		1		
glutaminyl-tRNA synthetase (QARS)	6	X76013	+	+	+	+		+	
glutamy-proly-tRNA	1	X54326	<b> </b>	-	1	$\vdash$	1		
synthetase (ÉPRS) glutathione peroxidase 1	2	M21304	+	+	+	+	+	+	
glutathione peroxidase 4 (phospholipid	1	X71973	+	+	+	+	-	+	
hydroperoxidase) (GPX4) glutathione S-transferase pi (GSTP1)	1	U30897		+	+	+	+	+	
glutathione S-transferase subunit 13 homolog	1	AF070657							*
glyceraldehyde-3- phosphate dehydrogenase (GAPD)	12	J02642					+		
<u> </u>	·	<del></del>	45		*				

		•							
glycogenin (GYG)	1	U31525	·	+	+	+		+	
glycophorin C (Gerbich blood group) (GYPC)	1	X12496		+	+	+		+	
glycoprotein M6B (GPM6B)	1.	U45955		+	+				<del></del>
glycyl-tRNA synthetase (GARS)	1	U09587		+	+	+		+	
glyoxalase I (lactoyl	1	L07837	+	+	+	+	·	+	
glutathione lyase) (GLYI) golgi autoantigen, golgin	1	U51587		+		.+			
subfamily a, 1 (GOLGA1) golgi autoantigen, golgin	1 .	L06147	:			-	•		
subfamily a, 2 (GOLGA2) (non-exact, 70%)					•				
golgi autoantigen, golgin subfamily a. 4 (GOLGA4)	. <b>1</b> 	U31906			1			·	
golgi autoantigen, golgin	. 1	X75304		+	+	+		+	. ,
subfamily b, macrogolgin (with transmembrane signal), 1 (GOLGB1)						,		-	
gp25L2 protein	4	X90872				<del>                                     </del>			
grancalcin	8	M81637	<u> </u>	+	*+	+	-	_	
granulin (GRN)	. 16	X62320	+	+	+	+		+	
granulin (GRN) (low match)	1	X62320				1		$\vdash$	
Granulysin (NKG5)	5	M85276	+	<del>                                     </del>				+	
granzyme A (granzyme 1,	1	M18737	+	+	• +	+	-	+	
cytotoxic T-lymphocyte- associated serine esterase									
3) (GZMA) GRB2-related adaptor	1	U52518	Tonly	J					
protein (GRAP) Grb2-related adaptor	, 1	AF090456	T				+		
protein 2 (GRAP2) GRO1 oncogene	1	X54489				+	-	+	
(melanoma growth stimulating activity, alpha)	•								(1)
(GRO1) growth arrest and DNA- damage-inducible gene (GADD153)	1	S40706							
growth arrest-specific 7 (GAS7)	4	AB007854		. +	+				
growth factor receptor- bound protein 2 (GRB2)	- 1	X62852	В	+			+	+	
GS1 (protein of unknown function)	1	M86934		+	+	+			
GS3955	4	D87119	<del> </del>	+	+	+	╁──	+	
GTP binding protein 1	1	U87964	<del>                                     </del>	+	+	+	<del>  -</del>	<del>                                     </del>	
(GTPBP1) GTP binding protein similar	-1	U87791		+	+	+	-	+	<u> </u>
to S. cerevisiae HBS1 (HBS1)	•								
GTPase activating protein- like (GAPL)	1	AB011110		+	+	+		+	high fetal brain
GTP-binding protein (low match)	1	Z49068	i .						
GTP-binding protein G(K), alpha subunit (=G(I) ALPHA-3)(=GTP-binding regulatory protein Gi alpha-	1	P08754							
3 chain) Gu protein (GURDB)	2	U41387	+	<del>  -</del>	+	+	$\vdash$	+	
guanine nucleotide binding	1			1		+-	$\vdash$		
guanine nucleotide binding protein (G protein), alpha inhibiting activity polypeptide 2 (GNAI2)	4	J03004	+	+	+	+		+	

VIO 00/40/42									
guanine nucleotide binding	7	M20597	. +	+	+	+1		+	
protein (G protein), alpha		·			٠			.	•
inhibiting activity					1	1			
polypeptide 3 (GNAI3)									
guanine nucleotide binding	2 .	X04409	B, T	+			+	+	
protein (G protein), alpha			٠.	l I	<b> </b>				
stimulating activity		. `			1				
polypeptide 1 (GNAS1)									
guanine nucleotide binding	. 1	Z18859							,
protein (G protein), alpha	-	,							
transducing activity polypeptide 2 (GNAT2)	,	·							
quanine nucleotide binding	2	AF017656		+	+	+		+	
protein (G protein), beta 5	2	AF017030		' '	•			:	•
(GNB5)				'				1	
guanine nucleotide binding	5	M36430	+	+	+	+	+	+	
protein (G protein), beta				Į.					
polypeptide 1 (GNB1)	•		41	i .	'			-	
guanine nucleotide binding	2	AF011496		+	+	+			
protein (G protein), q		·				•			
polypeptide (GNAQ)		٠.			·		,	,	
guanine nucleotide binding	1	L25665	+	+	+	+		+	
protein-like 1 (GNL1)				<u>L</u>				Ŀ	
guanine nucleotide	1	L13857	+	+	+	+			
exchange factor	<u> </u>	<u> </u>	<u> </u>						
guanine nucleotide	1	X15610	+	+	+	+		+	
regulatory factor (LFP40)				l					
guanine nucleotide	1	· U72206	+	+	+	+		+	
regulatory factor (LFP40)		•							
GUANINE NUCLEOTIDE-	1	P25388			۱.			ļ	
BINDING PROTEIN BETA				ł	ŀ			l	
SUBUNIT-LIKE PROTEIN		· '		l	,	1			l' ·
12.3 (P205) (RECEPTOR				i	l	١			· 1
OF ACTIVATED PROTEIN				1	ŀ			1	l ' ' 1
KINASE C 1) (RACK1)	1	U10860		-	+	┝			
MONOPHOSPHATE	<b>'</b> .	.010000						ĺ	
SYNTHETASE (GMPS)				ł	1			ļ	i
guanosine monophosphate	1	M24470		<del>                                     </del>				<del>                                     </del>	
reductase (GMPR) (non-				1			٠.		l
exact. 72%)	1.4		· .	1					. ·
quanosine-diphosphatase	1	AF016032		1			-		
like protein					l ··				
guanylate binding protein	2	M55542		+	+	+	+	+	
1, interferon-inducible,				i	1				1
67kD (GBP1)							<u> </u>		
guanylate binding protein	6	M55543	+	+	+	+		+	·
2, interferon-inducible		0.0		i	· .			1	l· . I
(GBP2)			l	1	Ь				<u> </u>
H2A histone family,	1	Z83742					۱.		
member C (H2AFC)					Щ.			1	
H2A histone family,	2	AF041483	+	+	+	+		+	
member Y (H2AY)				<u> </u>	<u> </u>		<u> </u>	L.	
H2B histone family,	2	Z80783	+	+	+	+	+	+	high in adrenal gland
member L (H2BFL)		Decora		<del> </del>			<b>—</b>	-	tumor
h2-calponin	1	D86059	<u> </u>			L			<u> </u>
H-2K binding factor-2	1	L08904		+	+	+		+	
H3 histone family, member	1	Z83735	-	+	1	<del> </del>	$\vdash$	<del>                                     </del>	
K (H3FK)	· '					[		1	· · ·
H3 histone, family 3A	7	M11353	+	+	+	+	<u> </u>	+	high in ovary
(H3F3A)			1	1		١.	l		
H3 histone, family 3B	15	Z48950	+	. +	+	+	T -	+	high in endothelial
(H3.3B) (H3F3B)	1.						1		cells
hbc647	1	U68494		. +	+	+	+	<u> </u>	· ·
heat shock 27kD protein 1	1	U12404	<del></del>	+	+	$\vdash$	+	+	
(HSPB1)	} '	012404	1	"	Ι΄.	l	Ι "	Ι΄	l
heat shock 40kD protein 1	4	D85429	+	+	+	+	+	+	high in testis
(HSPF1)	•	D03429	T		· '	Ι΄.	'	Ι΄.	
heat shock 60kD protein 1	3	M22382	+	+	+	+	+	+	
(chaperonin) (HSPD1)			1		`·	ľ	l .	1	· ·
heat shock 70kD protein 1	<del></del>	M59828	+	+	+	+	+	+	high in activated T
(HSPA1A)	'		1	1	1	l .		1	cells
V	<u> </u>	·							· · · · · · · · · · · · · · · · · · ·

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heat shock 70kD protein 5 (glucose-regulated protein, 78kD) (HSPA5)	13	X87949		+	+		+	-	
heat shock 70kD protein 6 (HSP70B') (HSPA6)	4 .	X51757	+	-+	+				
heat shock 70kD protein 9B (mortalin-2) (HSPA9B)	2	L15189		.+	+	+	+	.+	
HEAT SHOCK COGNATE 71 KD PROTEIN	1	P11142							· .
heat shock factor binding protein 1 (HSBP1)	2	AF,068754						·	high in many libraries
heat shock protein 90	13	M27024	+	+	+	+	+	+	nigh in many libraries
heat shock protein, DNAJ- like 2 (HSJ2)	1	D13388		+ 1	+	L.	+	+	
Hect (homologous to the E6-AP-(b'6-53A) carboxy! terminus) domain and RCC1 (CHC1)-like domain (RLD) 1 (HERC1)	1	U50078		+	+	+			
hect domain and RLD 2 (HERC2)	1	AB002391	+	+	+	+		+	
helicase-like protein (HLP)	1	X98378	+	+		+		+	·
helix-loop-helix protein HE47 (E2A)	1	M65214						+	
hematopoiétic cell-specific Lyn substrate 1 (HCLS1)	18	X16663	+		†	+	·	+	
heme oxygenase (decycling) 1 (HMOX1)	. 1	X06985		+	<u> </u>	+	+	+	
HEMOGLÓBIN ALPHÁ CHAIN	1	P19015 AF117710			<u> </u>	ļ	_	<u> </u>	
hemoglobin beta (beta globin) hemoglobin, alpha 1	5 301	V00491			+		+	+	
(HBA1) hemoglobin, alpha 1	301	V00491 V00491			ļ,	ļ.,	<u> </u>	Ľ	
(HBA1) (low match) hemoglobin, alpha 1 (low	1	V00493	<del></del>						·
match) hemoglobin, alpha 1 (non-	1	J00153		ļ. 	-	<del>  -</del>	_	-	
exact, 76%) hemoglobin, alpha 1 (non-	1	V00493			- 	-	-	<u> </u>	
exact, 82%) hemoglobin, beta (HBB)	129	V00497	+	+	+	+	+	+	high in many libraries
hemoglobin, beta (HBB)	1	V00497		╁┈─	$\vdash$	<del>                                     </del>	-	<del> </del>	
(low match) hemoglobin, beta (HBB)	1	L48220				-	-		
(low match)	1	D10924	+	+	+	+	$\vdash$	+	
receptor 4 (fusin) (CXCR4) hemopoietic cell kinase	5	M16591	•		-	+		+	
(HCK) hepatitis C-associated	2	D28908			$\vdash$	<del> </del>	<del> </del>	-	
microtubular aggregate protein p44		D46494		+		<u> </u>	<u>L</u> .	+	
hepatoma-derived growth factor		D16431	+	_	+	+	_	Ļ	
Hermansky-Pudlak syndrome (HPS)	2	U65676 AF026246			<u> </u>	$oxed{oxed}$	_	igspace	<u> </u>
HERV-E integrase (non- exact 76%aa)	1. 2	S63912		ļ.,	+	+	<u> </u>	+	
heterogeneous nuclear protein similar to rat helix destabilizing protein (FBRNP)		*						Ĺ	
heterogeneous nuclear ribonucleoprotein (C1/C2) (HNRPC)	4	M16342							
heterogeneous nuclear ribonucleoprotein A/B (HNRPAB)	1	M65028	*	+	+	+	+		

heterogeneous nuclear ribonucleoprotein A1 (HNRPA1)	20	X12671	. +	+	+	+	+	+	High in alveolar rhabdomyosarcoma
heterogeneous nuclear ribonucleoprotein A2/B1 (HNRPA2B1)	3	M29064	+	+	+	+	+	+	High in activated T cell, fetal brain
heterogeneous nuclear ribonucleoprotein D (hnRNP D)	2	D55 <b>673</b>	+	+	+	+	+	+	
heterogeneous nuclear ribonucleoprotein D-like (HNRPDL)	5	D89092	+	+	+	+	+	+	
heterogeneous nuclear ribonucleoprotein F (HNRPF)	1.	L28010	+	+	•	*		+	е
heterogeneous nuclear ribonucleoprotein F (HNRPF) (83%)		L28010							
heterogeneous nuclear ribonucleoprotein G (HNRPG)	2	Z23064	·	+	+	+		+	**
heterogeneous nuclear ribonucleoprotein H (HNRPH) (FTP-3)	3	P55795							
heterogeneous nuclear ribonucleoprotein H (HNRPH) (low match)	1	P31943							
heterogeneous nuclear ribonucleoprotein H1 (H) (HNRPH1)	2	L22009	+	+	+	+		+	
heterogeneous nuclear ribonucleoprotein K (HNRPK)	21	S74678	.+	+	+	+	+	+	
heterogeneous nuclear ribonucleoprotein R (HNRPR)		AF000364		+	+	+	+	+	0
heterogeneous nuclear ribonucleoprotein U (scaffold attachment factor A) (HNRPU)	3	X65488	+	+	•	+	+	+	
hexokinase 1 (HK1)	2	X66957	· · · · · · · · · · · · · · · · · · ·	+	+	+	<del>  -</del>	+	
hexokinase 2 (HK2)	3	Z46376	+	+	+	+		+	· · · · · · · · · · · · · · · · · · ·
hexokinase 3 (HK3)	2	U51333		+-	-			₩	
hexosaminidase A (alpha polypeptide) (HEXA	1	S62047						-	
HGMP07I gene for olfactory receptor	2	U76377							
High density lipoprotein binding protein (HDLBP)	2	M64098	+ .	+	. +	+	+	+	
high-mobility group (nonhistone chromosomal) protein 1 (HMG1)	5	X12597	+	-	+	+	+	+	
high-mobility group (nonhistone chromosomal) protein 1 (HMG1) (non- exact 60%)	1.	D63874							
High-mobility group (nonhistone chromosomal) protein 17 (HMG17)	2	M12623	+	+	+	+		+	
high-mobility group (nonhistone chromosomal) protein 2 (HMG2)	2	M83665	+	+	+	*	+	+	
high-mobility group (nonhistone chromosomal) protein isoforms I and Y	2	L17131	+	+	+		+	+	
high-risk humanpapilloma viruses E6 oncoproteins targeted protein E6TP1 beta (=A8007900 KIAA0440)	<b>1</b>	AF090990.1							
histidine ammonia-lyase (HAL)	1	D16626			+	, only	<del>,</del>		

histidyl-IRNA synthetase   2   Z11518   +	
Nistocompatibility antigen   1	
histone deacetylase 1	
histone deacetylase 1   2   D50405   +   +   +   +   +   +     +	
histone deacetylase 5 (NY- 1 AF039691 + + + CO-9)	
HL9 monocyte inhibitory 2 U91928 + receptor precursor	
HLA class   heavy chain   1   (HLA-Cw*1701)	
HLA class I locus C heavy 1 X58536 chain	
HLA class II SB 4-beta 1 X03022	
HLA class III region 1 U89335 + + + + + + + + containing NOTCH4 gene	
HLA-A 1 272423	
HLA-A 2 AJ006020	
HLA-A*7402 1 AJ223060	
HLA-A11 1 U02934	
HLA-B 2 X75953	
HLA-B 1 X83401	
HLA-B 1 X78426	
HLA-B associated 1 Z37166 + + + + + + + + transcript-1 (D6S81E)	
HLA-B associated 2 M33509 + + + + + transcript-2 (D6S51E)	
HLA-B*1529 4 D44501	
HLA-Bw72 antigen 119 L09736 + + + + + high in many	libraries
HLA-C gene (HLA- 1 D83957 Cw*0701 allele)	
HLA-Cw*0701 9 Z46810	•
HLA-Cw*0801 1 D64151	
HLA-Cw*1203 1 D64146	•
HLA-DC classII 2 X00370 histocompatibility antigens alpha-chain (=K01160)	
HLA-DR alpha-chain 17 M60333 + + + + + + high in splee	<u>n</u>
HLA-F (leukocyte antigen 3 X17093 + + + + F)	
HMG box containing 3 AF019214 protein 1	
hMLH1 (=U83845) 1 AB017806.1	
Hmob33 3 Y14155	
HMT1 (hnRNP 2 U80213 + + + + + + + + methyltransferase, S. cerevisiae)-like 1	
(HRMT1L1)	
(HRMT1L1) hnRNP C1/C2 2 D28382	·
hnRNP C1/C2 2 D28382 homeobox (=X58250 1 M60721 Mouse homeo box protein, put. transcription factor	·
hnRNP C1/C2 2 D28382 homeobox (=X58250 1 M60721 Mouse homeo box protein, put. transcription factor involved in embryogenesis and hematopoiesis)	
homeobox (=X58250 1 M60721 Mouse homeo box protein, put. transcription factor involved in embryogenesis and hematopoiesis) homeobox protein (HLX1) 1 U14326 (=M60721)	
homeobox (=X58250	
homeobox (=X58250 1 M60721 Mouse homeo box protein, put. transcription factor involved in embryogenesis and hematopoiesis) homeobox protein (HLX1) 1 U14326 (=M60721) homeodomain-interacting 1 AF004849 + + + +	

.00/40/49			•						.1/CA00/00003
HPV16 E1 protein binding protein	1 . 1	U96131		+	+			+	
HRIHFB2157	1	AB015344	<del>                                     </del>	+	+	_	_	+	
HRX-like protein (=AF010403 ALR)	1.	Y08836							-
hsc70 gene for 71 kd heat shock cognate protein	3	Y00371							6
HSPC012	1	AF077036.1		1.					
HSPC021	1	AF077207.1						·	
HsPex13p	1	U71374							
htra2-beta-2	1	U87836	+	+	+	+		+	
HU-K4	1	U60644	-					i ·	
hunc18b2	1	U63533		+	+	+		+	
HUNKT	1	Y12059	+	+		+	+	+	
huntingtin-interacting protein HYPA/FBP11 (HYPA)	1	AF049528							
hVps41p (HVPS41)	-1	U87309		<del> </del>	· ·	_	-	-	
hydroxyacyl-Coenzyme A	1	U04627		+	+	<del>                                     </del>	+	<del> </del>	
dehydrogenase/3-ketoacyl- Coenzyme A thiolase/enoyl-Coenzyme A hydratase (trifunctional									
protein), alpha subunit (HADHA)									·
hydroxyacyl-Coenzyme A dehydrogenase/3-ketoacyl- Coenzyme A	1	D16481	+	+	+	+		+	4
thiolase/enoyl-Coenzyme A hydratase (trifunctional protein), beta subunit (HADHB)						٠			
hydroxysteroid (17-beta) dehydrogenase 1 (HSD17B1)	1	U34879		+			+		٠.
hypothetical protein	1		<del></del>	$\vdash$		-	-	$\vdash$	
hypothetical protein (AL008729) (dJ257A7.2)	1		<u> </u>						
hypothetical protein (CIT987SK_2A8_1 chromosome 8)	1	U96629			٠.				
hypothetical protein (clone 24640)	1	AF055004					Ė		
hypothetical protein (clone ICRFp507G2490).	1	Z70222	_	-					
hypothetical protein (dJ1042K10.4) (non-exact 176%)	1	AL022238							
hypothetical protein (dJ465N24.1 similar to predicted yeast and worm proteins)	2	AL031432				-			
hypothetical protein (dJ487J7.1.1)	2	AL008730	<u>_ · .</u> ,		,			_	
hypothetical protein (dJ753P9.2)	2 .	AL023653	,						-
hypothetical protein (DKFZp586I111)	7	AL050131.1							
hypothetical protein (J257A7.2)	1	AL008729							
hypothetical protein (KIAA0440) (=AF026504 R.norvegicus SPA-1 like protein)	1	AB007900					•		1
hypothetical protein (L1H 3' region)	1		<u> </u>						
hypothetical protein (S164)	1	P49756							0

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hypothetical protein (similar to thrombospondin) (non- exact 56%)		AF109907							*
hypothetical protein 3	1								
hypothetical protein B (HSU47926) (non-exact, 56%)	1	U47926							ů.
hypothetical protein from BCRA2 region (CG005)	3	U50532	+	+	+	+		+	
hypoxia-inducible factor 1, alpha subunit (basic helix- loop-helix transcription factor) (HIF1A)		AF050115							
la-associated invariant gamma-chain (clones fambda-y (1,2,3))		M13555					·	·	
iduronate 2-sulfatase (Hunter syndrome) (IDS)	2	M58342	+	+	+	+	-	. +	
Ig heavy chain V region (=D11016)	<del></del>	L20779						<u> </u>	
lg heavy chain variable	2 .	M34024	<del></del>	-		<del> </del>			
region Ig heavy chain variable region (VH4DJ) (clone	. 1	275378							
T14.4) Ig heavy chain variable region (VH4DJ) (clone T22.18)	<del></del>	Z75392				·			
Ig J chain	1	M12378				-		<u> </u>	
lg kappa	1	S49007						<del>                                     </del>	
IG kappa light chain variable region A20	1	X63398							
lg kappa light chain, V- and J-region (=X59315)	1	D90158	<del></del>						
lg lambda light chain variable region (26- 34ITIIIF120)	1	Z85052			v.	,			
Ig mu-chain VDJ4-region	1	M16949				-	-	$\vdash$	
lg rearranged anti-myelin kappa-chain (V-J4-region, hybridoma AE6-5)	-1	M29469							181
lg rearranged H-chain mRNA V-region	2	M97920							
lg rearranged light-chain V region (=D90158)	1 :	M74020							
IGF-II mRNA-binding protein 3 (KOC1) (non- exact, 75%)	1	U97188	+	+	+				
IgG Fc binding protein (FC(GAMMA)BP)	1	D84239	+	+		+		+	
lgG heavy chain variable region (vH26)	1	M83136							
IgM heavy chain (C mu, membrane exons)	1	X14939							
IkB kinase-beta (IKK-beta)		AF029684	-						
IL-1 receptor type II	1	U14177	_						- <del></del>
IL2-inducible T-cell kinase (ITK)	2	S65186	*						
immediate early protein (ETR101)	1	M62831	+-		+	+		+	
immunogloblin light chain (lambda)	1 .	D87018							
immunoglobulin (CD79A) binding protein 1 (IGBP1)	1	Y08915	В, Т	+	+		+		
immunoglobulin C (mu) and C (delta) heavy chain (=K02878)	2	X57331							
immunoglobulin G Fc receptor IIIB	1	Z46223							
immunoglobulin gamma 3 (Gm marker) (IGHG3)	3	Y14737	+			+		+	high in many libraries
	<del></del>								· · · · · · · · · · · · · · · · · · ·

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immunoglobulin gamma heavy chain variable region (=X61011)	. 1	Z66542							
immunoglobulin heavy ichain (VI-3B)	1 *	X62109							
immunoglobulin heavy chain J region	ſ	X86356							
immunoglobulin heavy chain J region, B1 haplotype	2	X86355							
immunoglobulin heavy chain variable region (IGH) (clone 21u-48)	1	AF062126	,						
immunoglobulin heavy chain variable region (IGH) (clone 23u-1)	1 .	AF062212							
immunoglobulin heavy chain variable region V1-18 (IGHV@) (=X60503)	2	M99641		,					
immunoglobulin heavy chain variable region V3-43 (IGHV@)	2	M99672					 		in
immunoglobulin heavy chain variable region V3-7 (IGHV@)	.3	M99649							
immunoglobulin IgH heavy chain Fd fragment	1	U07986							
immunoglobulin kappa light chain	1	X58081							
immunoglobulin kappa light chain V-segment A27	1	X12686	·						
immunoglobulin light chain	1	D86990			-				·
immunoglobulin light chain (low match)	1	D86996							
immunoglobulin light chain variable region (lambda IIIb subgroup) from IgM rheumatoid factor		L29157				٠.			
immunoglobulin M heavy chain V region=anti-lipid A antibody	1	S50735							
immunoglobulin mu (IGHM)	9	X57086	+	+		+		+	
immunoglobulin mu binding protein 2 (IGHMBP2)	1	L24544	T	+			†		
immunoglobulin superfamily, member 2 (IGSF2)	1	Z33642							
Immunoglobulin VH mRNA (487 bp) (=M99652 Immunoglobulin heavy	1	X61013							
chain variable region V3-11									
imogen 38 (IMOGEN38)	1	Z68747	1	+	+	+		+	
IMP (inosine monophosphate) dehydrogenase 1	. 1	J05272	+	+	+	+			
(IMPDH1) IMP (inosine monophosphate) dehydrogenase 2	2	L39210	+	+	+	+	0	+	
(IMPDH2) inc finger protein 151 (pHZ-	1	Y09723	+		+			+	
67) (ZNF151) inc finger protein, C2H2,	<del>. 1</del>	AF011573	<u> </u>	+	+	Ľ.		Ľ.	· · · · · · · · · · · · · · · · · · ·
rapidly turned over (ZNF20)			•						
inducible poly(A)-binding protein (IPABP)	1	U33818	+	+	+	+		+	
inducible poly(A)-binding protein (IPABP) (low match)	1	U33818							£)

inducible protein (Hs.80313)	2	L47738	+	+	+	+		+		
inhibitor of DNA binding 2, dominant negative helix-	4	M97796	+	+	+	+	+	+		
loop-helix protein (ID2) inhibitor of kappa light	2	AF044195				_		ı —		
polypeptide gene enhancer in B-cells, kinase complex-										
associated protein (IKBKAP)		,								
inositol 1,3,4-trisphosphate 5/6-kinase	1	U51336	+	+.	+	+	+	+		
inositol 1,4,5 trisphosphate receptor type 1 (ITPR1)	1	U23850		+	+ /	+			,	
inositol 1,4,5-trisphosphate 3-kinase B (ITPKB)	2	X57206	В	+	+		+			
inositol monophosphatase	1	538980	l .				٠.			
inositol polyphosphate-5- phosphatase, 145kD (INPP5D)	2	U84400	+	+	+	+		+		
Ins(1,3,4,5)P4-binding protein	1 .	X89399		+				+		
insulin-like growth factor 2 receptor (IGF2R)	5	Y00285	+	+	+	+		+		
integral membrane protein 1 (ITM1)	1 .	L38961			.+	+		+		
integral membrane protein 2C (ITM2C)	1	AF038953			. +		+.	+	11	·
integral membrane protein Tmp21-I (p23)	3	U61734	+	+	+	+	+	+		
integrin beta 4 binding protein (ITGB4BP)	2	AF047433			+			+		
integrin, alpha 2b (platelet glycoprotein lib of lib/lila	. 3	M34480		+			+			`
complex, antigen CD41B) (ITGA2B)						-				
integrin, alpha 5 (fibronectin receptor, alpha	4	X06256	+	+	+		+	+	1.54	
polypeptide) (ITGA5) integrin, alpha L (antigen	· 6	Y00796				-	-	-		
CD11A (p180), lymphocyte function-associated antigen 1; alpha polypeptide)								1		
(ITGAL) integrin, alpha M	1	M18044	·	-		<u> </u>	<u> </u>	_		
(complement	1 .	101180-1-1								•
componentreceptor 3, alpha; also known as		-								
CD11b (p170), macrophage antigen alpha		. •	-							٠
polypeptide) (ITGAM) integrin, alpha X (antigen	-1	M81695	<u> </u>	+	<u> </u>	<u> </u>		+	· · · · · · · · · · · · · · · · · · ·	
CD11C (p150), alpha polypeptide) (ITGAX)									. = .	
integrin, beta 1 (fibronectin	2	X07979								
receptor, beta polypeptide, antigen CD29 includes MDF2 MSK12) (ITGB1)		į.								*
integrin, beta 2 (antigen	32	M15395	+	+	<del>                                     </del>	+	-	+		
CD18 (p95), lymphocyte function-associated antigen										•
1; macrophage antigen 1 (mac-1) beta subunit) (ITGB2)	. •								·	
integrin, beta 7 (ITGB7)	1	M68892	+							
Integrin-linked kinase (ILK)	1	U40282	+ .	+	+	+	+	+		
intercellular adhesion molecule 1 (CD54), human rhinovirus receptor	<b>(</b>	J03132					•			
(ICAM1) intercellular adhesion	1	X15606	+	+	+	+	$\vdash$	+		
molecule 2 (ICAM2)		-				<u> </u>			L	

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intercellular adhesion molecule 3 (ICAM3)	6	X69819	+		1			+	:
ntercellular adhesion nolecule 4, Landsteiner-	1	L27670						+	
Niener blood group ICAM4)		Voltes		luma	boms				
nterferon consensus sequence binding protein 1 ICSBP1)	1	M91196	vv,	Tymp	oma				
nterferon consensus sequence binding protein 1	1	M91196							
ICSBP1) (low match) Interferon regulatory factor 2 (IRF2)	- 4·	X15949	+	+	+	+			- 01
nterferon regulatory	4	L05072	+	+	+	+		+	
nterferon regulatory factor5 (IRF5)	. • 1	U51127	+	+	-	+			
nterferon, gamma- inducible protein 16 (IFI16)	2	M63838	+	+	+	+		+	
nterferon, gamma- nducible protein 30 (IFI30) NTERFERON-INDUCED	9	J03909 P32455	+	+	·	+	,	+	
GUANYLATE-BINDING PROTEIN 1 (GUANINE NUCLEOTIDE-BINDING PROTEIN 1) (non-exact		F 32433			·				
62%) Interferon-induced protein 17 (IFI17)	3	X84958		+	+	+		+	
nterferon-induced protein 54 (IFI54)	5	M14660							
nterferon-inducible (1-8D)	5	X57351	1		+		+	+	
nterferon-inducible (1-8U)	1	X57352			+		+	+	·
interferon-related developmental regulator 1 (IFRD1)	5	Y10313		+	+			+	
interferon-stimulated transcription factor 3, gamma (48kD) (ISGF3G)	2	M87503		+		+		+	
interleukin 1 receptor, type	1	U64094		<del>                                     </del>	٠.	+			
Interleukin 10 receptor, beta (I.10RB)	1	U08988	Tactivat	éd	+			+	
interleukin 12 receptor, beta 1 (IL12RB1)	2	U03187	+	+	. + -	+	+	+	only found in T cell
interleukin 13 receptor, alpha 1 (IL13RA1) interleukin 16 (lymphocyte	2 6	Y09328 U82972		+		<u> </u>		Ť	
chemoattractant factor)									,
interleukin 18 receptor 1 (IL18R1)	9	U43672 M26062							
interleukin 2 receptor, beta (IL2RB) interleukin 2 receptor,	6	M26062 D11086	+	-	+	<u> </u>	<u> </u>	+	
gamma (severe combined immunodeficiency) (IL2RG)									
interleukin 4 receptor (IL4R)	3	X52425	+	+		+		+	
interleukin 6 receptor (IL6R)	5	X12830		+			<u>                                     </u>	+	·
interleukin 6 signal transducer (gp130, oncostatin M receptor) (IL6ST)	. 1	M57230							
interleukin 7 receptor (IL7R)	14	M29696	+					+	
interleukin 7 receptor (IL7R) (low match)	1	AF043123							
interleukin 8 (IL8)	8	Y00787	+		+		+		High in activated T cells, bone and pancreatic islets

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interleukin 8 receptor alpha (IL8RA)	11	L19591						·	
interleukin 8 receptor, beta (IL8RB)	14	M94582							
interleukin enhancer binding factor 2, 45kD (ILF2)	3	U10323	+	+	+	+	+	+.	high in uterus
interleukin enhancer binding factor 3, 90kD (ILF3)	2	U10324		a.			• ;		,
interleukin-1 receptor- associated kinase 1 (IRAK1)	2	L76191		+	+	+		+	
interleukin-1 receptor- associated kinase 1 (low match)	1	U52112							
interieuxin-i U receptor, alpha (IL10RA)	5 .	U00672	+	1 4	+	+		-	
interleukin-11 receptor, alpha (IL11RA)	7.	Z38102		+	+				
INTERLEUKIN-14 PRECURSOR (IL-14) (HIGH MOLECULAR WEIGHT B-CELL GROWTH FACTOR) (HMW-BCGF) (non-exact	1	P40222				-			*
46%) intestinal carboxylesterase; liver carboxylesterase-2 (ICE)	1	U60553		+	. ,		+.		
inversin protein (non-exact 52%)	1	AF084367							
IQ motif containing GTPase activating protein 1 (IQGAP1)	6	L33075							
IQ motif containing GTPase activating protein 2 (IQGAP2)	1	U51903		+		+			
isocitrate dehydrogenase 1 (NADP+), soluble (IDH1)	1	AF020038	+	+	+	+	+	+	
isocitrate dehydrogenase 2 (NADP+), mitochondrial (IDH2)	2	X69433	+	+	+	+	+	+	
isocitrate dehydrogenase 3 (NAD+) alpha (IDH3A)	2	U07681			+				
isocitrate dehydrogenase 3 (NAD+) gamma (IDH3G)	1	Z68907	+	+		+		+	
isolate Aus3 cytochrome b (CYTB)		AF042516				_			
isolate TZCCR5-179 CCR5 receptor (CCR5) isopentenyl-diphosphate	1	AF011524 X17025	+	+	+	+	_		
delta isomerase (IDI1)  Janus kinase 1 (a protein	5	M64174		Ţ	+	ļ.		+	
tyrosine kinase (JAK1)  Janus kinase 2 (a protein	1	AF005216		<u> </u>		ļ. —		<u> </u>	i
tyrosine kinase 2 (a protein tyrosine kinase) (JAK2) Jk-recombination signal	2	L07876				igspace	_	-	
binding protein (RBPJK)	1	AJ005890		+		+			
jumonji (mouse) homolog	1	U57592		+	+	+	$\vdash$	+	
(JMJ) jun D proto-oncogene (JUND)	1.	X51346	+	+	+	+		+	
jun dimerization protein	1	AF111167				上			only found in germ
junction plakoglobin (JUP)	1	M23410		+	+	+	L	+	<u> </u>

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kangai 1 (suppression of	1	U20770	+	+	+	+	+	+	1
tumorigenicity 6, prostate; CD82 antigen (R2					·	ļ			
leukocyte antigen,			] .			ŀ			· .
antigen detected by			· ·		ŀ	1	1	į .	
monoclonal and antibody IA4)) (KAI1)					1	1			
karyopherin (importin) beta	2	L39793	+	+	+	+	+	+	<del></del>
1 (KPNB1)		. ,	<u> </u>	<u> </u>	<u> </u>				
karyopherin (importin) beta 2 (KPNB2)	1	072395	+	+	+.	+	İ		
karyopherin alpha 1	1	575295	+	+	+	<del>  i </del>	+	H	
(importin alpha 5) (KPNA1)			•	<u> </u>					
karyopherin alpha 2 (RAG cohort 1, importin alpha 1)	1	U09559			Ī .	1			
(DPNA2)				ļ	]	ŀ			
karyopherin alpha 3	1	D89618		+	•	ļ .	+	$\vdash$	
(importin alpha 4) (KPNA3) karyopherin alpha 4		MI 7007	<u></u>	ļ.,	<u> </u>	<u>:                                    </u>	<u> </u>	<u> </u>	
(KPNA4)		M17887		+	+	-	1	1	
Katanin (80 kDa) (KAT)	1	AF052432	<del> </del>	+	+	+	<del>                                     </del>	+	
KE03 protein	2	AF064604			<u> </u>	┢	1	╁	
Kelch-like ECH-associated	1	D50922	<del></del>	<del>                                     </del>	<del>                                     </del>	<del>                                     </del>	+-		
protein 1 (KIAA0132)			· .	1	1				
(66%aa) Keratin 8 (KRT8)	1	X74929		+		+	+	+	·
ketohexokinase	· ·	X78678		<u>                                   </u>	_ <del></del>	+	<u> </u>	Ι.Τ	
(fructokinase) (KHK)	'	A10010	-16-	*	ļ	•	+		
KIAA0001 (KIAA0001)	1	Q15391		<del>                                     </del>	<u> </u>		$\vdash$	1	
(72% aa)		Q15391			<u> </u>	L_	<u> </u>	<u> </u>	
KIAA0001 (KIAA0001) (76% aa)	. 1	Q15391			'	ł	l		
KIAA0001 (KIAA0001)	4	Q15391		<del> </del>	<del>                                     </del>	┢	$\vdash$	$\vdash$	
(non-exact 72%)	·							<u> </u>	. 1
KIAA0002 (KIAÁ0002)	5	D13627		, +	+	+		+	
KIAA0005 (KIAA0005)	4	D13630		+	+	+	Ĺ.,	+	
KIAA0010 (KIAA0010)	1	D13635		+			<u>.</u>	+	<u> </u>
KIAA0016 (KIAA0016)	1	. D13641	+	+_	+			+	. , _ , _ , _ , _ , _ , _ , _ , ,
KIAA0017 (KIAA0017)	2	D87686			L				
KIAA0022 (KIAA0022)	2	D14664		+	+	+			
KIAA0023 (KIAA0023)	1	D14689		+		Г			
KIAA0024 (KIAA0024)	1	D14694	+	+	+	+		+	
KIAA0025 (KIAA0025)	1	D14695		+	+	+	+	+	
KIAA0026 (KIAA0026)	2	D14812		+	+	+		+	
KIAA0027	1	D25217	<u> </u>	+					
KIAA0032 (KIAA0032)	2	D25215		+	+	+			
KIAA0040 (KIAA0040)	1 -	D25539	+	+	+	+	$\vdash$	+	<u> </u>
KIAA0050 (KIAA0050)	4	D26069		<del>                                     </del>	<del> </del>	<del>                                     </del>			
KIAA0053 (KIAA0053)	17	D29642	+	<del>                                     </del>	+	+		<del> </del>	
KIAA0057 (KIAA0057)	1	D31762	+	+	+	+	+	+	high in fetal lung
KIAA0058 (KIAA0058)	11	D31767	+	<del> -</del> :	+	+	<del>                                     </del>	+	
KIAA0063 (KIAA0063)	3	D31884	+	+	+	+		+	· · · · · ·
KIAA0064 (KIAA0064)	1	D31764	+	+	+	+	-	+	
KIAA0066	1.	D31886	+	+	+	+	$\vdash$	+	<u> </u>
KIAA0068	1	D38549	v *	+	+	+	+	+	<del> </del>
KIAA0073	3	D38552		+	+	+	<u> </u>	+ .	<del></del>
KIAA0081	2	D42039		+	<u> </u>	+		+	
KIAA0084	2	D42039	+	+	+	+	<u> </u>	+	
KIAA0085	26	U30498	+	<u> </u>	İ		<u> </u>		ļ
	t	-		+	+	+	+	+	<u>'</u>
8800AAIX	3	D42041	+	+	+	+	+	+	<u> </u>
KIAA0090	2	D42044	+	+	+	+	+	+	
KIAA0092 (KIAA0092)	1	D42054		+	+	+		+	

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KIAA0094	3	D42084		1	+	+			
KIAA0095 (KIAA0095)	1	D42085							
KIAA0096	1	D43636	+	+	+	+		+	
KIAA0097 (KIAA0097)	1	X92474	T	+	+		+		
KIAA0099 (KIAA0099)	3	D43951	+	+	+	+	+	+	
KIAA0102 (KIAA0102)	2	D14658		+		+	+	+	
KIAA0105	1	D14661	В	+			+	+	
KIAA0120	2 .	P37802		1					
KIAA0120 (non-exact, 65%)	1	M83106							
KIAA0121 (KIAA0121)	1	D50911	+	+	+.	+		+	
KIAA0123	1	.D21064	· .	+.	+	+		+	
KIAAU 128	4 ,	D50918	+	+	+	-4×	1	1	
KIAA0129 (KIAA0129)	1	D50919	+	+	+	+	<b></b>		
KIAA0130 (KIAA0130)	1	AF055995		+	+	+			
KIAA0136	2	D50926		<del>                                     </del>					
KIAA0137 (KIAA0137)	1	AB004885		+	+	+	_	+	
KIAA0140 (KIAA0140)	1	D50930	+	+	-	+	<del>                                     </del>	+	
KIAA0141 (KIAA0141)	3	D50931		+	<del>                                     </del>	<del>                                     </del>	<del> </del>	<del>                                     </del>	
KIAA0144 (KIAA0144)	3	D63478	+	+	+	+	<del>                                     </del>	.+	
KIAA0144 (KIAA0144) (low match)	1	D63478							
KIAA0144 (non-exact 61%)	1	Q14157				<u> </u>	$\vdash$	╁╌	
KIAA0144 (non-exact 65%)	1	Q14157	· · · · · · · · · · · · · · · · · · ·	+	-	<del>                                     </del>		<del> </del>	¥
KIAA0146	2	D63480		+	+	+	1	+	1
KIAA0148 (KIAA0148)	1 . 1	D63482	<del></del>	+-+-	<del>                                     </del>	_	_	+	
KIAA0154	2	D63876	+	+	+	+	<del> </del>	+	
KIAA0156	1	D63879		+-	+	+		+	
KIAA0160	2	D63881		+		<del>                                     </del>		<del> </del>	
KIAA0161 (KIAA0161)	1	D79983	+	+	-	+	-	<del>                                     </del>	
KIAA0164 (KIAA0164)	3	D79986		+	-	╁		┼	
KIAA0167 (KIAA0167)	1	D79989		+		┼	-	+	<u> </u>
KIAA0168 (KIAA0168)	3	D79990		+	+	+	├─	+	
KIAA0169	3	D79991		+	-	+	$\vdash$		
KIAA0171 (KIAA0171)	3	D79993		+	+	+	$\vdash$	+	
KIAA0174 (KIAA0174)	7	D79996	+	+	+	+-	╁	+	
KIAA0179	2	D80001		+	+	+		+	
KIAA0181	1 1	D80003		+	+	+	-	+	<del></del>
KIAA0183	4	D80005	+	+	+	+	+	+	<del>                                     </del>
KIAA0184		D80006	+	+	+	+	<del>                                     </del>	+	<del></del>
KIAA0191 (72% aa)	1	D83776		$+\dot{-}$	⊢ <u>`</u>	<del> </del>	⊢	<del>  `</del>	
KIAA0191 (non-exact 77%)	1			+	1.		├	┼—	<u> </u>
•	1	י דרקים	+	++	+	+	-	+	
KIAA0193 (KIAA0193)	1	D83777	T	+	+	╀	<b>—</b>	+	
KIAA0200 (KIAA0200)	7	D83785		<del>                                     </del>	<u> </u>	╀	$\vdash$	+-	
KIAA0210 (KIAA0210)	3	D86965		<del> </del>	ļ.,	↓	_	1	
KIAA0217	2	D86971	<b>.</b>	+	+	+	_	+	
KIAA0219	2	U77700		+	+	+		+	
KIAA0222 (KIAA0222)	- 1	D86975			<u> </u>	<u> </u>	_	↓	
KIAA0223	2	D86976							
				+	1				1
	1	D86982	+						<u>                                     </u>
KIAA0232 (KIAA0232)	1	D86985	*	+	+	+	$\vdash$	+	
KIAA0232 (KIAA0232)	1		*	1	+	+	-	+	
KIAA0229 KIAA0232 (KIAA0232) KIAA0233 (KIAA0233) KIAA0235	1	D86985	+	1	+	+	1	+	

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KIAA0239 (non-exact 80%)									
MINIOZOS (HOH CAROL CO 10)	1	D87076							
KIAA0240	1	D87077							
KIAA0242	4	D87684	+	+	+	+	+	+	
KIAA0248	2	D87435		+	. +	+		+	
KIAA0249 (KIAA0249)	3	D87436	+ + .	+	+	+		+	
KIAA0253	5	D87442	+	+	+	+	+	+	
KIAA0254 (KIAA0254)	. 1	D87443		+	+	+			
KIAA0255(KIAA0255)	4	D87444		+	+	+		+	
KIAA0262 (KIAA0262)	3	D87451	+	+.	+	+		+	
KIAA0263 (KIAA0263)	- 1	D87452	+	+	+	+.		+	
KIAA0264	3	D87453		+	+	+		+	
KIAA0268	1	D87742	+	+		+		+	
KIAA0269	1	Q92558							-
KIAA0275 (KIAA0275)	13	D87465	.+	+		+	_	+	
KIAA0304 (KIAA0304)	2	AB002302	+	+	+	+	+	+	
KIAA0308	2	AB002306		+	+.		<del></del>	+	-
KIAA0310 (KIAA0310)	1	AB002308		+	+	+	<del>                                     </del>	+	
KIAA0314 (=U96635	3	AB002312		<del> </del>		_	_		
M.musculus ubiquitin	:	1				1			
protein ligase Nedd-4) KIAA0315 (KIAA0315)	4	AB002313		+	+	+	+	+	
KIAA0325 (=L08505		AB002313		<u> </u>		<u> </u>	ļ ,	<u> </u>	
R.norvegicus cytoplasmic dynein heavy chain (MAP		AB002323							
1C))							<u> </u>		
KIAA0329 (KIAA0329)	1	AB002327		+	+	+		+,	
KIAA0330	1	AB002328	+	+	+			+	
KIAA0332	1	AB002330		+	+	+		+	
KIAA0333	2	AB002331		+	+	+	+	+	
KIAA0336 (KIAA0336)	3	AB002334	+	+	+	+		+	
KIAA0336 (KIAA0336) (low match)		AB002334	٠.				·		
KIAA0342 (KIAA0342)	1	AB002340		+	+	1		+	
KIAA0344 (KIAA0344)	2	AB002342				+		+	
KIAA0354 (KIAA0354)	1	AB002352	+ .	+	+_	+		+	
KIAA0365 (KIAA0365)	3	AB002363	+	+.	+	+	+	+ ,	
KIAA0370	6	AB002368		+	+	+	+	+	
KIAA0372 (KIAA0372)	1 1	AB002370							
KIAA0373 (KIAA0373)	1	AB002371		+	·	+			
KIAA0375 (KIAA0375)	1	AB002373		+		+			
KIAA0377 (KIAA0377)	1	. AB002375		+		+	+		
KIAA0379	1	AB002377				+			
KIAA0379 (non-exact, 65%)	1	AB002377							
KIAÁ0380 (KIAA0380)	1	AB002378	+	+		+		+	
KIAA0380 (KIAA0380) (60%aa)	1	AB002378							
KIAA0382 (KIAA0382)	2	AB002380		+	+	+		+	,
KIAA0383	1	AB002381							
KIAA0386 (KIAA0386)	5	AB002384							
KIAA0392	1	AB002390					Ŀ		·
KIAA0397 (KIAA0397)	4	AB007857		+	+	+	+	+	
KIAA0403	3	AB007863					$L^{-}$		
KIAA0404	1	AB007864		+		+	]		
				+	<del></del>	+	1	1	,
KIAA0409	1	AB007869		+		•		1	1
KIAA0409 KIAA0421	1	AB007889 AB007881	+	+	+	Ť		+	·

KIAA0428 (KIAA0428)	9	Y13829						•	
KIAA0429 (KIAA0429)	2	AB007889	+	+	+	+		+	<u> </u>
KIAA0430 (KIAA0430)	2	AB007890		•					only in ovary
(IAA0432 (KIAA0432)	2	U86753	T	+	+			•	
(IAA0435 (KIAA0435)	1	AB007895							
(IAA0438 (KIAA0438)	1	AB007898		-+	+	+		+	
KIAA0447 (KIAA0447)	3	AB007916	+ .	+	+	+		+	4
KIAA0449	1	AB007918		+				+	
KIAA0456	1	AB007925		+	+	+		+	1 1
KIAA0458 (KIAA0458)	1	AB007927							
KIAA0462	1	AB007931	+	+	+	+		+	
KIAAN465	1 1	AB007934		+ ,	+	+,	.+	+	
KIAA0476 (KIAA0476)	1	AB007945		+	+	+			
KIAA0489	1	AB007958		+				$\vdash$	
KIAA0494 (KIAA0494)	1	AB007963	+	+	+	+	-	+	
KIAA0515	<del> </del>	AB011087	+	+	+	+		+	
KIAA0521	3	AB011093	+	++	·		· ·	+	
KIAA0525	1	AB011097		+		+	· ·	<del>                                     </del>	
KIAA0530	1	AB011102		+	+	+		-	*
KIAA0532	1.	AB011104	+	+	+	+		+	<del> </del>
KIAA0537 (KIAA0537)		AB011109		+	·			-	<del></del>
KIAA0540	<del>                                     </del>	AB011112	. +	+	+	+	_	+	
KIAA0543	<del>                                     </del>	AB011115		+	+	+		+	·
KIAA0544	+ + -	AB011116		+	+	+	$\vdash$	+	`
	<del> </del>	AB011121	<u> :</u>	++	+	+		+	, ,
KIAA0549	2	AB011121		++	<u> </u>	<u> </u>		+	
KIAA0551		AB011125		++	+	+	<u> </u>	+	ļ
KIAA0554	8	AB011126		++	<u> </u>	+	<u> </u>	-	
KIAA0561	1	1		<del>                                     </del>		ļ.	_	1	
KIAA0562 (KIAA0562)	1	AB011134		<del> </del>	ļ.,	<u> </u>		ļ.	
KIAA0563 (KIAA0563)	1	AB011135		<del>                                     </del>		L.	L_	+	'-
KIAA0569 (KIAA0569)	2	AB011141		+	+	+	<u> </u>	<u> </u>	<u> </u>
KIAA0571 (KIAA0571)	2	AB011143		+	+	+		<del> </del>	<u> </u>
KIAA0573 ·	1	AB011145		+		+		+	
KIAA0576	1	AB011148						$\perp$	
KIAA0580	1	AB011152				<u> </u>		L	
KIAA0584	1	AB011156		+					
KIAA0592	- 3	AB011164	+	+	+	+		+	· · · · · · · · · · · · · · · · · · ·
KIAA0596	1	AB011168		+	+			<u> </u>	
KIAA0598 (KIAA0598)	-1	AB011170		+	+	+		_	
KIAA0608	1	AB011180		1 -	. +	+		Π	
KIAA0614	2	AB014514	+	+	+	+		+	
KIAA0615 (KIAA0615)	1	AB014515		1		Ì		Т	
KIAA0621	1	AB014521		+	+			+	
KIAA0648	1	AB014548		+	+	+	,	+	
KIAA0652 (KIAA0652)	1	AB014552	+.	+.	+	+	Г	+	1
KIAA0668	+	AB014568		+	<u> </u>	$^{\dagger}$		1	<del>                                     </del>
KIAA0669	+	AB014569		+-	1	$\vdash$	1	+-	
KIAA0671 (KIAA0671)	<del>                                     </del>	AB014571	·	+	+	+	+-	+	
KIAA0675 (KIAA0675)	1-1	AB014575		+	-	+	+	+-	
KIAA0676		AB014576		++	+	+	۲	+	<del> </del>
KIAA0677 (KIAA0677)	2	AB014577		+	+	+	+	+	
· · · · · · · · · · · · · · · · · · ·		AB014578	+	++	+	+	Ė	+	
KIAA0678 KIAA0679	1 6	AB014579	, T	+	+	+	↓	+	

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KIAA0680 (KIAA0680)	1	AB014580		1 . 1					
KIAA0692	1	AB014592	. +	+	+	+		+	
KIAA0697	1 .	AB014597		1					
KIAA0699	<del>1</del> .	AB014599	+	+	+	+		+	· · · · · · · · · · · · · · · · · · ·
KIAA0700	1	AB014600		+	+	+		+	
KIAA0737 (KIAA0737)	3	AF014837	+	+	+	+		+	
KIAA0748 (KIAA0748)	2	AB018291		+					
KIAA0763 (KIAA0763)	2	AB018306	+	. +	+	+		+	
KIAA0769 (KIAA0769)	2	AB018312		+	+	+		+	<del>,</del>
KIAA0782	<del>-</del>	AB018325	+	++		+		-	high in BPH stroma
KIAA0796	<del>-</del>	AB018339		+-	+	+		+	
KIAA0798 (KIAA0798)	<u> </u>	AB018341		+		-		-	
KIAA0823	<u> </u>	AB020630	<del></del>	+	_	$\vdash$		-	
KIAA0854	<del></del>	AB020661	·	+	+	+		+	<u> </u>
KIAA0856	<del></del>	AB020663		+	+	+		+	·
KIAA0860	<del>'</del>	AB020667		+	<u> </u>	+		<u> </u>	
KIAA0862	1.	AF054828		+	+	+		<b> </b> -	
				+-	<u> </u>	<b>↓</b>	<u> </u>	<u> </u>	
KIAA0871 (non-exact 88%)	1.	AB020678		1		1	<u> </u>		
KIAA0873	1	AB020680		+	+	+		+	
KIAA0892	1	AB020699	+	+	+	+		+	4
KIAA0906	1	AB020713	+	+	+	+		+	
KIAA0991	1	AB023208.1							
killer cell lectin-like receptor subfamily B, member 1 (KLRB1)	1	U11276			+	+		+	
killer cell lectin-like receptor subfamily C, member 4 (KLRC4)	1	U96846							
kinectin 1 (kinesin receptor) (KTN1)	1	D13629		-					
kinesin family member 5B (KIF5B)	2	X65873	•	+	+	+	-		
kinesin-like DNA binding protein	1	AB017430	. +	+	*	+	Ŀ	+	
Krueppel-related DNA- binding protein (TF6) (low match)	1	M61869		è					
Kruppel related gene (clone pHKR1RS)	1	M20675							
Kruppel-like zinc finger protein Zf9	3	U51869	+	<b>+</b>	+	+	+	+	
Kruppel-like zinc finger protein Zf9 (non-exact 76%)	1	U44975		+	+		+	+	
kruppel-type zinc finger protein, ZK1	1	AB011414.1							
L apofemitin	3	X03742				L	_		
actate dehydrogenase A (LDHA)	3	X02152		+	+	+	+		
actate dehydrogenase A (LDHA) (non-exact, 81%)	1	X02152				Ļ	Ŀ		high in fetal lung
actate dehydrogenase B (LDHB)	6	X13794	+	+	+	+	_	+	fibrablast high in bone marrow
actotransferrin (LTF)	1	U07643			<del> </del>	+	<u> </u>	<b>↓</b> •	Ingit in botte matter
laminin binding protein (low score)	1	D28372	<del></del> ,		ļ	<u> </u>	ŀ		high in many library
laminin receptor 1 (67kD); Ribosomal protein SA (LAMR1)	20	X15005	+	†		+	+	+	high in many librarie
laminin receptor homolog (3' region)	1	S35960							
laminin, gamma 1 (formerly LAMB2) (LAMC1)	2	J03202	+	+	+			+	

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latent transforming growth factor beta binding protein 1 (LTBP1)	2	M34057		+	+	+		+.	
LAZ3/BCL6 (=Z79582;D28522/4)	1	Z79581				•			
LDLC	2	Z34975 .	÷	+	+	+		+	
lecithin-cholesterol acyltransferase (LCAT) (non-exact, 66%)	1	M17959							
lectin, galactoside-binding, soluble, 2 (galectin 2) (LGALS2)	1	M87842		:		+			
lectin, galactoside-binding, soluble, 3 binding protein (galectin 6 binding protein) (LGALS3BP)	1	L13210	+	+	+	+		+	
leucine rich repeat (in FLII) interacting protein 1 (LRRFIP1)	5	AJ223075	+	+	+	+	+	+	1.5
leucocyte immunoglobulin- like receptor-5 (LIR-5)	2	AF072099				+			
leucocyte immunoglobulin- like receptor-6a (LIR-6)	7	AF025530	_		•				
leucocyte immunoglobulin- like receptor-7 (LIR-7)	2	U82275		+					only found in CNS
leukemia virus receptor 1 (GLVR1)	1	L20859	+ ,	+	+	+		+	
leukocyte adhesion protein p150,95 alpha subunit	1	M29484						_	
leukocyte antigen, HLA-A2	3	Y13267							
leukocyte immunoglobulin- like receptor (MIR-10)	3	AF025528		+					
leukocyte tyrosine kinase (LTK)	1	X60702	+ 						found only in blood
leukocyte-associated Ig- like receptor 1 (LIAR1)	3	AF013249		+	+	+	+	+	
leukotriene A4 hydrolase (LTA4H)	2	J03459 AF062075	+	. *		<del> </del>	Ľ	+	·
leupaxin (LDPL)		1			<u>.                                    </u>	1	<u> </u>		
ligase I, DNA, ATP- dependent (LIG1)	1	M36067	В, Т	+	+	+	+	+	
LIM and SH3 protein 1 · (LASP1)	2	X82456 AC002073	+	+	+	<del> </del>	Ľ	+	
(LIMK2)	- 1	AC002073	<del></del>	<u> </u>		Ľ	_	Ľ	
1 '	1	U93566	+	+	+	+	+	+	
Line-1 repeat mRNA with 2 open reading frames Line-1 repeat with 2 open	1	M22332	<del></del>	+	. +	Ļ	+	+	high in gastric tumor
reading frames	1 .	P08547		<u> </u>	-	Ľ	Ľ		ingii iii gastiic tuiloi
TRANSCRIPTASE HOMOLOG									
lipase A, lysosomal acid, cholesterol esterase (Wolman disease) (LIPA)	4	X76488	+	+	+	+		+	
lipase, hormone-sensitive (LIPE)	1	L11706	+	+				+	
LMP7	1	L11045							
Lon protease-like protein (LONP)	2	X74215	+	+	+	+	·	+	
low density lipoprotein- related protein 1 (alpha-2- macroglobulin receptor) (LRP1)	2	AF058414							only in liver
low density lipoprotein- related protein-associated protein 1 (alpha-2- macroglobulin receptor- associated protein 1) (LRPAP1)		M63959		+	+		+	+	·

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low density lipoprotein-	1	M639 <b>59</b>				1			
related protein-associated	• .	•			-				
protein 1 (alpha-2-				1 1					•
macroglobulin receptor-				1			. 1		•
associated protein 1)	٠.								
(LRPAP1) (non-exact, 75%)			٠,						
low-affinity Fc-gamma		L08107	· · · · · · · · · · · · · · · · · · ·	-					
receptor IIA		200107							
LPS-induced TNF-alpha	9	AF010312	+	+	+	+	+	+	
factor (PIG7)		/ 11 0 1 00 1 2		'					
Lst-1	1	U00921	+	+	+	+		+	
L-type amino acid	1	AF104032						<u> </u>	
transporter subunit LAT1		AF 104032			l				
lung resistance-related		X79882	+	+	+	+		+	
protein (LRP)		, 300E		'	i .		= 6	'	
Lymphocyte antigen 75	- 1	AF011333	В	_				-	
(LY75)	·					١. ا		١.	
lymphocyte antigen 9 (LY9)	2	L42621		1					
lymphocyte antigen HLA-	2	L42345			<u> </u>	-			
B*4402 and HLA-B*5101			1	1	l		7	ľ	
lymphocyte cytosolic	42	J02923		1	<del> </del>		<del></del>		<del></del>
protein 1 (L-plastin) (LCP1)	**		٠,	1	l			1	• .
lymphocyte cytosolic	.4 .	U20158		•	lymp	hom	a. T	activ	rated
protein 2 (SH2 domain-									•
Icontaining leukocyte					•				ė
protein of 76kD) (LCP2)		•	-						<u> </u>
lymphocyte glycoprotein	2	X04391	+	Ī	+				
T1/Leu-1									
lymphocyte-specific protein 1 (LSP1)	16	M33552	+	+	+	+		+	
	·	M36881		+				+.	
lymphocyte-specific protein tyrosine kinase (LCK)	7	IVI3000 I		*				T.	
lymphoid phosphatase	1	AF001847	<del> </del>	<del> </del>	-	<del>-</del>	├—	$\vdash$	
LyP1	·	. 71 00 1047				1			ł ·
lymphoid-restricted	4	U10485	+.	+	+	+		<del>                                     </del>	
membrane protein (LRMP)	7		٠.	1	<u> </u>		1	•	
lymphoid-specific SP100	1	U36500	· · · · · · · · · · · · · · · · · · ·	-		_	_	+	
homolog (LYSP100-A)				1		l		1	
lymphoma proprotein	2	U33849	· +	+	+	+		+	
convertase (LPC)					l	1			
LYSOSOMAL	1	P10619							
PROTECTIVE PROTEIN	·			1.	l	1		1	
PRECURSOR	l	1		1	1	1	İ		
(CATHEPSIN A)		0)		1	l		ļ		
(CARBOXYPEPTIDASE C)		104400	<u> </u>	<del> </del>	<del></del>	<u> </u>	<del> </del>	<u> </u>	
lysosomal-associated	1	J04182	+	+	.+	+	+	+	
membrane protein 1 (LAMP1)	ļ	İ	}	1	l	1	l	1	
Lysosomal-associated	1	J04183	<del></del>	+	+	+	+	+	
membrane protein 2		1 307,103		'	'	1	'	1	
(LAMP2)	<u> </u>				1	1 :		1	
lysozyme (renal	39	M19045	+	+	+	+	1-	+	-
amyloidosis) (LYZ)	1		l .	1		1	1		
lysyl-tRNA synthetase	2	D32053	+	+	+	+		+	
(KÁRS)	_		1	1		1			
M phase phosphoprotein	1	X98494	1						
10 (U3 small nucleolar	l		I	1	!	1	1	l	
ribonucleoprotein) (MPP-		1	i .	1	•	ł	٠.	ł	
10)		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	<u> </u>	<u> </u>		1	<u> </u>	<b>—</b>	
M1-type and M2-type	2	X56494		1		١.	1		
pyruvate kinase	ļ	AFA21AA	<del> </del>	<del> </del>	<u> </u>	<u> </u>	—	Ь.	<u> </u>
m6A methyltransferase	. 7	AF014837	+	+	1	+	1		
(MT-A70)	<del></del>	1120045	<b></b>	<del> </del>	+	+	⊢	1	-
mab-21 (C. elegans)-like 1 (MAB21L1)	1	U38810	1	+	*	*	l	+	
MacMarcks		X70326	+ .	+	+	+	+	+	<del></del>
l	1	1	<u> </u>	1		┸—	Ļ	Ь_	
macrophage-associated	1	Z22968	1	+	+	+	1	+	
antigen (MM130)	l	<u> </u>	l	1			<u>L</u> .		<u> </u>

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MADS box transcription enhancer factor 2,	1	U49020		+	+	+		+	
polypeptide A (myocyte lenhancer factor 2A) (MEF2A)									
MADS box transcription enhancer factor 2,	.1	L08895		+	+	+		+	
polypeptide C (myocyte enhancer factor 2C)									
(MEF2C) major cytoplasmic tRNA- Val(IAC) (=M33940)	1	X17516						•	
major histocompatibility complex class I beta chain	1	M95531	<del></del>						·
(HLA-B)	41	₹03949	. + .	+	+ .	+ ,		+	high in villous ladenoma
complex, class I, A (HLA-A) major histocompatibility complex, class I, A (HLA-A) (low match)	1	Z72422							adenoma
major histocompatibility complex, class I, C (HAL-C)	82	M24097	+	+	+	+	+	+	
major histocompatibility complex, class I, E (HLA-E)	77	M20022	+ :	+	+	+		+	
major histocompatibility complex, class II, DM BETA (HLA-DMB)	2	U15085	+ ;	+	• +	+		+	
major histocompatibility complex, class II, DP beta 1 (HLA-DPB1)	- 10	M57466	+	+	+	+		.+	
major histocompatibility complex, class II, DR beta 1.(HLA-DRB1)	9	V00522	+	+	+	+		+	
Major histocompatibility complex, class II, Y box-binding protein I; DNA-binding protein B (YB1)	2	M24070	· .	+	+		+	+	
malate dehydrogenase 1, NAD (soluble) (mdh1)	1	D55654	+ -	+	+	+	+	+	
malate dehydrogenase 1, NAD (soluble) (MDH1)	3	D55654		+	+		+	+	
malonyl-CoA decarboxylase precursor	2	AF097832							
maltase-glucoamylase (mg) manic fringe (Drosophila)	<sub>1</sub>	AF016833 U94352	+	_	+	+	_	+	
homolog (MFNG)	1	X76057	*	+	+	+		+	
isomerase (MPI) mannose phosphate	2	X76057	•	+	+	+		+	
isomerase (mpi) mannose-6-phosphate receptor (cation	3 .	X56253		+	+		+	+	
dependent) (M6PR) mannose-P-dolichol utilitzation defect 1	1	AF038961		+	+	+		+	
(MPDU1) mannosidase, alpha B, lysosomal (MANB)	1	U60885		+		+	+	+	
mannosyl (alpha-1,3-)- glycoprotein beta-1,2-N- acetylglucosaminyltransfer ase (MGAT1)	1	M55621	+	+	+	+	+	+	-
map 4q35 repeat region	1	AF064849							
MAP kinase-interacting serine/threonine kinase 1 (MKNK1)	2	AB000409		,+	+	+	+	+	
MAP/ERK kinase kinase 3 (MEKK3)	5	U78876		+					
MAP/ERK kinase kinase 5 (MEKK5)	1	D84476		+	+		+		

. W O 00/40749			•		*				.1/CA00/00003
MAP/microtubule affinity- regulating kinase 3 (MARK3)	4	M80359	0.	+	+			+	
Marenostrin protein	1 .	Y14441		1					
MASL1	1.	AB016816		<del> </del>					
MAX dimerization protein (MAD)	3	L06895		ļ ·	-			+	
MaxiK potassium channel beta subunit	1	AF035046							
MBP-2 for MHC binding protein 2	1	X65644		+	+	+		+	·
Meis (mouse) homolog 3 (MEIS3)	1	U68385	·	+	+	+		+	
melanoma-associated antigen p97 (melanotransferrin)	1	M12154			·				160
membrane cofactor protein	4	X59405		+	+	+		+.	
(CD46, trophoblast- lymphocyte cross-reactive antigen) (MCP)			·						
membrane component, chromosome 17, surface marker 2 (ovarian	4	D14696		+	+,	+	+	+	
carcinoma antigen CA125) (M17S2)									
membrane metallo- endopeptidase (neutral endopeptidase,	2	J03779	B		+ .	+	+	+	
enkephalinase, CALLA, CD10) (MME)			·						*
membrane protein, palmitoylated 1 (55kD) (MPP1)	. 2	M64925		+	+	+	+	+	
meningioma expressed antigen (MGEA)	1	U94780				+			
meningioma-expressed antigen 11 (MEA11)	1 .	U73682	+	+		+	+		•
Menkes Disease (ATP7A) putative Cu++-transporting P-type ATPase	1	L06133		+			·		
metallothionein 2A (MT2A)	1	V00594	_	+	+	+	+	+	
metaxin 1 (MTX1)	1	U46920		+		+		+	
methionine adenosyltransferase II, alpha (MAT2A)	2	X68836	+	,+	+	+		+	
methyl-CpG binding domain protein 1 (MBD1) (non-exact 59%aa)	1	Y10746		-					
methylene tetrahydrofolate dehydrogenase (NAD+ dependent),	2	X16396	+	.+	+	+		*	
methenyltetrahydrofolate cyclohydrolase (MTHFD2)		•					· 		
methylenetetrahydrofolate dehydrogenase (NADP+ dependent),	); <b>1</b>	J04031		+	+	+	+	+	
methenyltetrahydrofolate cyclohydrolase, formyltetrahydrofolate									
synthetase (MTHFD1) methyltransferase, putative	2	AJ224442	ļ	<del> </del>	<b> </b>	ļ		_	
MHC antigen (HLA-B) (=L42024)	1	U14943				100	$\vdash$		
MHC class 1 region	2	AF055066	<del> </del>	+-		H	-	H	
MHC class I antigen (HLA-A2)	1	U70863	<del>  .</del>				-	-	
MHC class I antigen (HLA- A33)	1	U19736	t	1			<del>                                     </del>		
MHC class I antigen (HLA- C)	1	U38975			·				
<del></del>		· · · · · · · · · · · · · · · · · · ·	<del></del>						

	•								
MHC class I antigen B*5801 (HLA-B)	1	U52813						·	
MHC class I antigen HLA-A	2	AF015930		_				_	
(HLA-A) MHC class I antigen HLA-A	1.	U36687		<del> </del>	<del> </del>	-	-	-	
(HLA-A-2402 allele) MHC class I antigen HLA-	2	X13112					<u> </u>		
A11K	-	· ·		<u>.                                    </u>		·			,
MHC class I antigen HLA-B (B*0801 variant) (=AF028596)	1	U67331							
MHC class I antigen HLA-B		U67330		H		-	-		
(B*0801 variant) (=U88254) MHC class I antigen HLA-B	1	AF017328			·			_	
(B*48 allele) MHC class I antigen HLA-B		AF014770		ļ	ļ	<u> </u>	_	<u> </u>	
ั((ที∟A-ซิ`า502 allele)						Ŀ			,
MHC class I antigen HLA-B (HLA-B*40MD)	1	U58643				_			
MHC class I antigen HLA-B (HLA-B*4103 allele)	1 .	AF028596							·
MHC class l'antigen HLA-B	1	AF035648					<u> </u>		
gene (HLA-B*4402 variant allele)	<u> </u>					ŀ			
MHC class I antigen HLA-B GN00110-B*3910	1	U52175			•				
MHC class I antigen HLA- Cw*04011	1,	D83030	·	•	<u>                                     </u>		<u> </u>		
MHC class I antigen	1	U56434		_	_	-			
R69772 HLA-A (Å*0302) MHC class I antigen	1	U58469		<del>                                     </del>			-		
SHCHA (HLA-B*4403 variant)									
MHC class I histocompatibility antigen	1	U06697							
(HLA-B) (clone C21/14)									
MHC class THLA B71 MHC class THLA-A	2	L07950 Flp			ļ		_	_	
(Aw33.1) · ·			<u> </u>						·
MHC class I HLA-B MHC class I HLA-B (HLA-	1	U18660 U18661	ļ			<u> </u>	<u> </u>		
B-07ZEL allele) (=X86704)	L								
MHC class i HLA-B (HLA- B-08NR allele)	-1	U28759	·						•
MHC class I HLA-B*3512 MHC class I HLA-B41	3	L76094 U17572		<u> </u>	<u> </u>	_			
variant (=U17572) MHC class I HLA-B44.2		×							
chain	1	M24038 .							
MHC class I HLA-B51- cd3.3	7	L41086							
MHC class I HLA-C allele	2	Z33459							
MHC class   HLA-Cw*0304 (=M84172; M99389)	1 .	D64150							
MHC class I HLA-Cw*0803	3	Z15144						-	
MHC class I HLA-Cw6	1	M28206							
MHC class I HLA-J antigen MHC class I lymphocyte	1	L56139 M19670							
antigen A2 (A2.1) variant	•	W19070	,						
MHC class I mic-B antigen	1	X91625							
MHC class I polypeptide- related sequence A (MICA)	1 .	L14848				+			
MHC class I protein HLA-C heavy chain (C*0701new allele) (=AF017331)	1	U61274							
MHC class II DNA Sequence (clone A37G7-	1	L18885 .							
1C11)				L	l			-1	

WO 00/40749									
MHC class II DQ-alpha associated with DRw6, DQw1 protein	1	M16995	+		+	+		+	
MHC class II DQ-beta	2	M17564		+	.0.	+		+	
associated with DR2, DQw1 protein		,.							
MHC class II HAL-DQ- LTR5 (DQ,w8) DNA	1 .	M33842							
fragment, long terminal repeat region									
MHC class II hla-dr alpha- chain	1	J00195				·		-	
(=J00197;M60334;K01117 1:J00194:M60333;X00274)						٠.		·	
MHC class II HLA-DRB1	1	AF007883							
MHC class II HLA-DRw11- beta-I chain (DRw11.3)	. 1	M21966					-		
MHC class II lymphocyte	1	M23907	·			-		<del>-</del>	
antigen (DPw4-beta-1) MHC CLASS II	1	P33076				<del> </del>	-	,	
TRANSACTIVATOR CIITA (non-exact 57%)									
MHC HLA-E2.1 (=X87679)	1	M32507	·	<u> </u>				L	,
MHC HLA-E2.1 (alpha-2 domain) (low match)	1	M32507							
Mi-2 autoantigen 240 kDa protein (non-exact 84%)	1	U08379			·				
microsomal stress 70 protein ATPase core (stch)	. 1	U04735			- 1				
microtubule-associated protein 4 (MAP4)	1 .	U19727	+	+	+	+		+	
microtubule-associated protein 7 (MAP7)	. 1	X73882							
mineralocorticoid receptor (aldosterone receptor)	2	M16801		+		+		+	
(MLR)		X62153		+	+	+		+	
maintenance deficient (S. cerevisiae) 3 (MCM31)				'					
minichromosome	1	AB011144		+	+	+		+	
maintenance deficient (S. cerevisiae) 3-associated protein (MCM3AP)		0			٠.				
minichromosome maintenance deficient (S.	2	X74795	+	+	+	+	+	+	
cerevisiae) 5 (cell division cycle 46) (MCM5)									*
mitochondiral cytochrome b	7	AF042517							·
mitochondrial 16S rRNA	11	Z70759						-	
mitochondrial ATP synthase (F1-ATPase)	2 .	X59066							
alpha subunit mitochondrial ATP	1	X69907		-				$\vdash$	
synthase c subunit (P1 form)		·							·
mitochondrial cytochrome b (CYTB)	6	AF042508							
mitochondnal cytochrome b small subunit of complex II	1	AB006202				-			
mitochondnal CYTOCHROME C OXIDASE POLYPEPTIDE I	1	P00395			*				
mitochondrial	ſ	P00403	-	+	$\vdash$	<del> </del>		$\vdash$	
CYTOCHROME C OXIDASE POLYPEPTIDE	,	33.00							. ·
II mitochondrial cytochrome	2	P00403	<del> </del>	-	-	-	$\vdash$	-	
C oxidase subunit II		l	L		<u> </u>		<u> </u>	L	<u> </u>

WO 00/40/49								•	·
mitochondrial cytochrome oxidase subunit II (COII)	5	U12691	·					·	
(=U12692 Hsa4 mitochondrion cytochrome				-					×χ·
oxidase subunit II)									·
mitochondrial DNA loop attachment sequences (clone LAS34)	1	X89763							
mitochondrial DNA	1	U94703		+		H			
polymerase accessory subunit precursor (MtPoIB)	•	:		,					*
nuclear gene encoding mitochondrial protein,									
mitochondrial DNA, complete genome	1	X93334		·	·				
mitochondrial genes for	8	V00710		<u> </u>	-	$\vdash$	-	<u> </u>	<del></del>
several tRNAs (Phe, Val, Leu) and 12S and 16S Iribosomal RNAs.							· ·		
mitochondrial genes for tRNA (Phe) and 12S rRNA (fragment)	3	V00660		•					
mitochondrial inner membrane preprotein	1	AF106622							
translocase Tim17a mitochondnal isolate Afr7 cytochrome b(CYTB)	1	AF042503					-		
mitochondrial loop attachment sequence	1	X89843							10
(clone LAS88)					<u> </u>	<u> </u>	<u> </u>	<u> </u>	
mitochondrial NADH dehydrogenase subunit 2 (ND2)	14	AF014893	*						
mitochondrial translational initiation factor 2 (MTIF2)	1	L34600		+	+	+		+	
mitochondrion cytochrome b	1	U09500							
mitogen inducible gene mig-2	1	Z24725	·	+	+	+	×	+	
mitogen inducible gene mig-2 (non-exact, 71%)	1	- Z24725 ·							· · ·
mitogen-activated protein kinase-activated protein kinase 3 (MAPKAPK3)	2	U43784		+	+	+		+	
MLN51	2	X80199		+	+	+	+	+	
MLN64 (=D38255 CAB1)	1	X80198	+	+	+.	+			
moesin (MSN)	14	M69066	+	+	+	+		+	
monocytic leukaemia zinc finger protein (MOZ)	2	U47742		+	+	+		+	
MOP1 ()	2	U29165	-						
motor protein (Hs.78504)	2	D21094	+	+	+	+		+	
mouse double minute 2, human homolog of; p53- binding protein (MDM2)	1	U39736			+	+			
M-phase phosphoprotein 6 (MPP-6)	1	X98263	<u> </u>	+	+	+		+	
M-phase phosphoprotein,	1	X98260					<u> </u>		
MPS1	. 1	L20314					<u> </u>		
Mr 110,000 antigen	2	D64154		+	<del>                                     </del>	+	+	+	
MRC OX-2, V-like region (=M17227)	1	X05324							
mu-adaptin-related protein- 2; mu subunit of AP-4 (MU-ARP2)	1	Y08387					-		·
multifunctional polypeptide similar to SAICAR synthetase and AIR carboxylase (ADE2H1)	1	X53793 .	+	+	+	+		+	

WO 00/40/49			•					. • •	TICAUUIUUUU
murine leukemia viral (bmi- 1) oncogene homolog (BMI1)	1	L13689		+		+.		+	
mutant (Daudi) beta2 - microglobulin	44	X07621							
mutated in colorectal cancers (MCC)	1	M62397		+	+			+	
myeloid cell leukemia sequence 1 (BCL2-related) (MCL1)	9	L08246	+	+	+	. +	+	-	
myeloid cell nuclear differentiation antigeN (MNDA)	- 11	M81750	+			·		+.	
myeloid differentiation primary response gene (88) (MYD88)	4	U70451		+	+	+		. +	
myeloid leukemia factor 2 (MLF2)	3	U57342		+ .	·	+		+	
myeloid/lymphoid or mixed- lineage leukemia (trithorax (Drosophila) homolog); translocated to, 7 (MLLT7)	8	U89867	·	+	+	+	;	+	
MYH9 (cellular myosin heavy chain)	1	M81105							
myomesin (M-protein) 2 (165kD) (MYOM2)	1.	X69089							
myosin IE (MYO1E)	-11	X98411		+		+			
myosin light chain kinase (MLCK)		U48959	. +		+	+		+	
myosin phosphatase, target subunit 1 (MYPT1)	2	D87930		+	+	+		+	
myosin regulatory light chain (=U26162)	2	D50372							
myosin VIIa (low match 71)	1	U55208							
myosin, heavy polypeptide 9, non-muscle (MYH9)	3	M81105	+	+	+	+		+	,
myosin, light polypeptide, regulatory, non-sarcomeric (20kD) (MLCB)	6	X54304	+	+	+	+	+	+	
myosin-i beta	1	X98507	+	+	+	+		+	
myristoylated alanine-rich protein kinase C substrate (MARCKS, 80K-L) (MACS)	1	D10522		+	+				
myxovirus (influenza) resistance 1, homolog of murine (interferon-inducible protein p78) (MX1)	. 1	M30817	+		•	+		+	
myxovirus (influenza) resistance 2, homolog of murine (MX2)	3	M30818			+				
N-acetylgalactosaminidase, alpha- (NAGA)	2	M62783	*	+	+	•	+	+	
N-acetylglucosamine receptor 1 (thyroid) (NAGR1)	1	L03532	·	+	+	+		+	
NACP/alpha-synuclein	2	U46896							
N-acylaminoacyl-peptide hydrolase (APEH)	1	D38441		+	+		+	+	
N-acylsphingosine amidohydrolase (acid ceramidase) (ASAH)	11	U47674	+	+	+	+		+	
NAD+-specific isocitrate dehydrogenase beta subunit precursor (encoding mitochondrial protein)	1	U49283	•		+	+	+	+	
NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 5 (13kD, B13) (NDUFA5)		U53468.1	+	+	+	+	•	+	

(ubiquinone) 1 beta   Subcomplex, 5 (16kD, SGDH) (NDUFB5)   NADH dehydrogenase   1	WO 00/40749	•						•	•	
subcomplex, 5 (18kD, SCDH) (NDUPSB) (subcomplex, 5 protein 2 to delivarogenase 1 to delivarogenase 1 to delivarogenase 2 to eductave) (NDUPSB) (subcomplex per subcomplex p	NADH dehydrogenase	1	AF047181		+	+	+	+	+.	
AP050640   AP050640	(ubiquinone) 1 beta	1			1		.			· · ·
AF050640	subcomplex, 5 (16kD,				.					•
Wilciumon   Fe S   protein   2			AE050640		+	+	+	+	+	
49kD  (NADH-coenzyme)		'	VI 0200-10		`	,				
Deductase) (NDUFS2) NADI-Idelydogenase (ubiquinone) flavoprotein 2 (24RD) (NDUFV2) NADI-Idelydogenase (ubiquinone) flavoprotein 2 (24RD) (NDUFV2) NADI-Idelydogenase 5 k Da delydogenase 5 k Da delydogenase 5 k Da delydogenase 5 k Da delydogenase 5 k Da delydogenase 5 k Da NADI-IDELOGENAME B5 REDUCTASE (BSR) (SOS) (SOS) (SOS) (SOS) (SOS) (SOS) (SOS) (NROI) NADI-IDELOUTONE  DAIDOREDUCTASE CHAIN 1 Nardiysin (N-arginine) (dibasic convertase) (NROI) Nardiysin (N-arginine) (dibasic convertase) (NROI) (NROI) Nardiysin (N-arginine) (dibasic convertase) (NROI) (NROI) Nardiysin (N-arginine) (dibasic convertase) (NROI) Nardiysin (N-arginine) (dibasic convertase) (NROI) Nardiysin (N-arginine) (dibasic convertase) (NROI) Nardiysin (N-arginine) (dibasic convertase) (NROI) Nardiysin (N-arginine) (dibasic convertase) (NROI) Nardiysin (N-arginine) (dibasic convertase) (NROI) Nardiysin (N-arginine) (dibasic convertase) (NROI) Nardiysin (N-arginine) (dibasic convertase) (NROI) National (NACA) natural Xiller cell group 7 sessociated to the convertase) (NROI) National Con	(49kD) (NADH-coenzyme	.								· .
MADH deliydrogenase	O eductase) (NDUFS2)	·								
(ubiquinone) flavoprotein 2 (2xkD) (NDDPY2) (x2xkD) (NDDPY2) (x2xkD) (NDDPY2) (x2xkD) (x2xb)	NADH dehydrogenase	1	M22538			+	+	+	+	
NADH-CYTOCHROME BS	(ubiquinone) flavoprotein 2	1	,					•		,
dehydrogenate 5 kba spound (DIVY) NADIFICYTOCHROME B5 REDUCTASE (BSR) S05/9xa9, NADIFICIAL (BSR) NADIFICIAL									<u> </u>	
Natural (NDUFY)   Natural (N	NADH:ubiquinone	2	AF053070	. +	+	+	+	+.	+	
NADH-CYTOCHROME 5	dehydrogenase 51 KDa	• 1				٠.	1		1	•
NEDUCTASE (B5R)   Sic99-as	NADO CYTOCUDOME RE		P00387						<u> </u>	
(50%-ae)   NADH-UBIDUINONE		' '	1 00001					· '	) ·	
NADH-UBIGUINONE   1		1	. :	• •	þ	). ·	1		•	·
OXIDOREDUCTASE CHAIN 1 Nardilysin (N-arginine) dibasic convertase) (NRD1) nascent-polypeptide- associated complex alpha polypeptide (NRCA) natural killer cell group 7 sequence (NKC57) natural killer cell group 7 sequence (NKC67) natural killer cell group 7 sequence (NKC67) natural killer cell group 7 sequence (NKC67) natural killer-associated transcript 3 (NKAT3) natural killer-associated transcript 3 (NKAT3) natural killer-associated transcript 3 (NKAT3) natural killer-associated transcript 3 (NKAT3) natural killer-associated transcript 3 (NKAT3) natural killer-associated transcript 3 (NKAT3) natural killer-associated transcript 3 (NKAT3) natural killer-associated transcript 3 (NKAT3) natural killer-associated transcript 3 (NKAT3) natural killer-associated transcript 3 (NKAT3) natural killer-associated transcript 3 (NKAT3) natural killer-associated transcript 3 (NKAT3) natural killer-associated transcript 3 (NKAT3) natural killer-associated transcript 3 (NKAT3) natural killer-associated transcript 3 (NKAT3) natural killer-associated transcript 4 (NKAT3) natural killer-associated transcript 4 (NKAT3) natural killer-associated transcript 4 (NKAT3) natural killer-associated transcript 4 (NKAT3) natural killer-associated transcript 4 (NKAT3) natural killer-associated transcript 4 (NKAT3) natural killer-associated transcript 5 (NKAT5) natural killer-associated transcript 4 (NKAT3) Nerote 5 (NKAT5) natural killer-associated transcript 5 (NKAT5) natural killer-associated transcript 5 (NKAT5) natural killer-associated transcript 4 (NKAT3) natural killer-associated transcript 5 (NKAT5) natural killer-associated transcript 6 (NKAT5) natural killer-associated transcript 6 (NKAT5) natural killer-associated transcript 6 (NKAT5) natural killer-associated transcript 6 (NKAT5) natural killer-associated transcript 6 (NKAT5) natural killer-associated transcript 6 (NKAT5) natural killer-associated transcript 6 (NKAT5) natural killer-associated transcript 7 (NKAT5) natural killer-associated transcript 7 (NKAT5) natural killer-ass		1	P03886						•	
Nardiysin (N-arginine dibasic convertase)   (NRD1)	OXIDOREDUCTASE		•				١ .	1		
Malunyshi (Near)   Malunyshi (	CHAIN 1								L.	
(NRD1) associated complex alpha polypeptide associated complex alpha polypeptide (NACA) natural killer cell group 7 sequence (NKG7) natural killer cell group 7 sequence (NKG7) natural killer cell group 7 sequence (NKG7) natural killer-associated 1 U30274 +	Nardilysin (N-arginine	2	U64898	+	+	+	+	ì	+	
Tascent-polypeptide   Sasociated complex alpha polypeptide (NACA)   Sequence (NKGT			•			٠.	1	٠ ا	1	
Insterior   Popper   Popper			χχήσησ		-	+	-	+	+	<del></del>
polypeptide (NÁCA) natural killer cell group 7	Inascent-polypeptide-	3	~00 <del>0</del> 0 <del>0</del>			`	1	i .	1	,
Seg115					'				1	<u>.</u>
Sequence (NKGT)	natural killer cell group 7	8	S69115		<u> </u>		+		+	
Natural killer cell transcript   19	sequence (NKG7)		/	·	<u> </u>	<u>                                     </u>	L.	<u>.</u>		
Date	natural killer cell transcript	19	M32011	+						
Itanscript 3 (NKAT3)	4 (NK4)			<u> </u>	L	<u> </u>			ļ :	lateral and
Descript   Descript		1.	U30274	+		1		l		ipiooa oniy
Iranscript 5 (NKAT5)   natural killer-tumor   recognition sequence (NKTR)   N-deacetylase/N- sulfotransferase (heparan glucosaminyl) 2 (NDST2)   Ndf protein kinase   3			AE02204E		-		₩		1	blood only
Total   Tota		1	AFU22045	. *	1	1				Diood only
recognition sequence (NKTR) N-deacetylase/N-sulfotransferase (heparan glucosaminyl) 2 (NDST2) Ndr protein kinase 3		<del> </del>	NATER	R	-	+	+	+	+	<del> </del>
(NKTR)		' '		١ ٢	1	<u> </u>	1	1	1	
N-deacetylase/N-sulfotransferase (heparan glucosaminyl) 2 (NDST2)   Ndr protein kinase   3   Z35102   +		'			1	.	1	1	1	8
Sulfotransferase (heparan glucosaminyl) 2 (NDST2)   Ndr protein kinase   3	N-deacetylase/N-	2	AF042084	+	+	i	+		+,	
Ndr protein kinase         3         Z35102         +           Nedd-4-like ubiquitin-protein ligase WWP1         1         U96113         +           nel (chicken)-like 2 (NELL2)         3         D83018         +         +         +           N-ethylmaleimide-sensitive factor attachment protein, alpha (NAPA)         1         U39412         +	sulfotransferase (heparan					1	1	1	1	1
Nedd-4-like ubiquitin- protein ligase WWP1 nel (chicken)-like Z (NELL2) N-ethylmaleimide-sensitive factor attachment protein, alpha (NAPA) N-ethylmaleimide-sensitive factor attachment protein, gamma (NAPA) N-ethylmaleimide-sensitive factor attachment protein, gamma (NAPA) N-ethylmaleimide-sensitive factor attachment protein, gamma (NAPG) neural precursor cell expressed, developmentally down-regulated 5 (NEDD5) neural precursor cell expressed, developmentally down-regulated 8 (NEDD8) neuregulinal 1 (NRG1) neuregulinal 1 (NRG1) neuroplastoma RAS viral (v-ras) oncogene homolog (NRAS) (Neuroblastoma RAS viral (v-ras) oncogene homolog (NRAS) (low match) Neuroplosition 2 (Dilateral 1 S73853 + + + + + + + + + + + + + + + + + + +	glucosaminyl) 2 (NDST2)			L		<u> </u>	1	<b>_</b>	↓	<u> </u>
protein ligase WWP1 nel (chicken)-like 2 (NELL2) N-ethylmaleimide-sensitive factor attachment protein, alpha (NAPA) N-ethylmaleimide-sensitive factor attachment protein, gamma (NAPA) N-ethylmaleimide-sensitive factor attachment protein, gamma (NAPG) neural precursor cell expressed, developmentally down-regulated 5 (NEDD5) neural precursor cell expressed, developmentally down-regulated 8 (NEDD8) neuregulated 8 (NEDD8) neuregulated 8 (NEDD8) neuregulated 1 U02330 neuregulated 8 (NEDD8) neuregulated 8 (NEDD8) neuroblastoma RAS viral (v-ras) oncogene homolog (NRAS) Neuroblastoma RAS viral (v-ras) oncogene homolog (NRAS) (low match) Neuroblastomia C (bilateral 1 S73853 + + + + + + + + + + + + + + + + + + +	Ndr protein kinase	3		1				L		
Netlylmaleimide-sensitive		1	U96113					Ī		
(NELL2) N-ethylmaleimide-sensitive factor attachment protein, alpha (NAPA) N-ethylmaleimide-sensitive factor attachment protein, gamma (NAPG) Neuroliprecursor cell	protein ligase WWP1			Ŀ	<u> </u>		<b>_</b>	<u> </u>	ــــ	<u> </u>
N-ethylmaleimide-sensitive factor attachment protein, alpha (NAPA) N-ethylmaleimide-sensitive factor attachment protein, gamma (NAPG) N-ethylmaleimide-sensitive factor attachment protein, gamma (NAPG) neural precursor cell system of the protein o	nel (chicken)-like 2	3	D83018	1	. +	+		1		,
factor attachment protein, alpha (NAPA) N-ethylmaleimide-sensitive factor attachment protein, gamma (NAPG) neural precursor cell 3 X92544 + + + + + + high in testis expressed, developmentally down-regulated 5 (NEDD5) neural precursor cell 1 D23662 + + + + + + + expressed, developmentally down-regulated 8 (NEDD8) neuregulin 1 (NRG1) 1 U02330 + + + + + high in testis expressed, developmentally down-regulated 8 (NEDD8) neuregulin 1 (NRG1) 1 U02330 + + + + + + high in testis expressed, developmentally down-regulated 8 (NEDD8) neuroblastoma RAS viral (v-ras) oncogene homolog (NRAS) Neuroblastoma RAS viral (v-ras) oncogene homolog (NRAS) (low match) Neurofibromin 2 (bilateral acoustic neuroma) (NF2) neuronal apoptosis 2 U19251 + + + + high in testis expressed.			1126332	ļ	<del> </del>	1-	-	<del>  .</del>	╄	·
alpha (NAPA) N-ethylmaleimide-sensitive factor attachment protein, gamma (NAPG)  neural precursor cell expressed, developmentally down-regulated 5 (NEDD5) neural precursor cell expressed, developmentally down-regulated 8 (NEDD8) neural precursor cell expressed, developmentally down-regulated 8 (NEDD8) neuregulin 1 (NRG1) 1 U02330 + + + + + + + + neuroblastoma RAS viral (v-ras) oncogene homolog (NRAS) Neuroblastoma RAS viral (v-ras) oncogene homolog (NRAS) Neuroblastoma RAS viral (v-ras) oncogene homolog (NRAS) (low match) Neurofibromin 2 (bilateral acoustic neuroma) (NF2) neuronal apoptosis 2 U19251 + + + + + + + + + + + + + + + + + + +	N-ethylmaleimide-sensitive	1	U39412		+	1	1	*		
N-ethylmaleimide-sensitive factor attachment protein, gamma (NAPG)  neural precursor cell 3 X92544 + + + + + + high in testis  expressed, developmentally down-regulated 5 (NEDD5)  neural precursor cell 1 D23662 + + + + + + + + expressed, developmentally down-regulated 8 (NEDD8)  neuregulated 8 (NEDD8)  neuregulin 1 (NRG1) 1 U02330 + + + + + + + + expressed, developmentally down-regulated 8 (NEDD8)  neuregulin 1 (NRG1) 1 U02330 + + + + + + + + + + + + + + + + + +		i		1			1		1	1
factor attachment protein, gamma (NAPG)  neural precursor cell expressed, developmentally down-regulated 5 (NEDD5)  neural precursor cell expressed, developmentally down-regulated 8 (NEDD8)  neuregulated 8 (NEDD8)  neuregulin 1 (NRG1) 1 U02330 + + + + + + + + + + + + + + + + + +	N othylmaleimide sensitare	1	()78107	<del> </del>	+	+	+	1	+	<del> </del>
gamma (NAPG)	factor attachment protein	'	0/810/			'	'	1	1	
Neuroblastoma RAS viral (v-ras) oncogene homolog (NRAS) (Neuroblastoma RAS viral (v-ras) oncogene homolog	gamma (NAPG)	1		· ·		1		1		
expressed, developmentally down-regulated 5 (NEDD5) neural precursor cell expressed, developmentally down-regulated 8 (NEDD8) neuregulin 1 (NRG1)		3	X92544	+	+	+	+	T	+	high in testis
developmentally down-regulated 5 (NEDD5)  neural precursor cell 1 D23662 + + + + + + + + + + + + + + + + + +	expressed,				1	I			1	
Neurolistoma RAS viral (v-ras) oncogene homolog (NRAS) (low match)   Neurolistoma RAS viral (v-ras) oncogene homolog (NRAS) (low match)   Neurolistoma RAS viral (v-ras) oncogene homolog (NRAS) (low match)   Neurolistoma RAS viral (v-ras) oncogene homolog (NRAS) (low match)   Neurolistoma RAS viral (v-ras) oncogene homolog (NRAS) (low match)   Neurolistoma (NF2)   Neurolistoma (NF2)   Neurolistoma (NF2)   Neurolistoma (NF2)   Neurolistoma (NF2)   Neurolistoma (NF2)   Neurolistoma (NAIP)   Neurolistom	developmentally down-	1 .		1	ì	1	I	1	1	
expressed, developmentally down-regulated 8 (NEDD8) neuregulin 1 (NRG1)		1			<u></u>	1	1	<b>!</b>	<del>↓</del>	<u> </u>
developmentally down-regulated 8 (NEDD8)		1	D23662	+	+	+	1.	+	*	1 .
regulated 8 (NEDD8) neuregulin 1 (NRG1)	expressed,		1		1	1	1	1	1	
neuregulin 1 (NRG1)		İ		į	1					1
neuroblastoma RAS viral (v-ras) oncogene homolog (NRAS)  Neuroblastoma RAS viral (v-ras) oncogene homolog (NRAS) (low match)  Neurofibromin 2 (bilateral acoustic neuroma) (NF2)  neuronal apoptosis 2 U19251 + + + + + + + + + + + + + + + + + + +		+ 1	U02330	<del> </del>	+	+	+	+	+	<del>                                     </del>
(v-ras) oncogene homolog (NRAS)  Neuroblastoma RAS viral (v-ras) oncogene homolog (NRAS) (low match)  Neurofibromin 2 (bilateral acoustic neuroma) (NF2) Ineuronal apoptosis 2 U19251 + + + + + + + + + + + + + + + + + + +		· · · · · · · · · · · · · · · · · · ·		<del>                                     </del>	<u> </u>	+	1	+	+-	ļ
(NRAS) Neuroblastoma RAS viral (v-ras) oncogene homolog (NRAS) (low match) Neurofibromin 2 (bilateral acoustic neuroma) (NF2) neuronal apoptosis 2 U19251 + + + + + + inhibitory protein (NAIP) neuronal cell adhesion 1 AB002341 + + + + +		4	ABUZUO9Z	T.	1 .	•	•	1.	-	1
Neuroblastoma RAS viral (v-ras) oncogene homolog (NRAS) (low match)  Neurofibromin 2 (bilateral acoustic neuroma) (NF2) neuronal apoptosis 2 U19251 + + + + + + + + + + + + + + + + + + +					1		1	1	1	1
(v-ras) oncogene homolog (NRAS) (low match)  Neurofibromin 2 (bilateral acoustic neuroma) (NF2) neuronal apoptosis 2 U19251 + + + + + + + + + + + + + + + + + + +		1	X68286	<b></b>	+	t	+	+-	+	
(NRAS) (low match)	(v-ras) oncogene homolog	8.				1	1			1
Neurofibromin 2 (bilateral 1 S73853 + + + + + + + + + + + + + + + + + + +	(NRAS) (low match)	1			1	1	1_	Τ.	1_	
neuronal apoptosis 2 U19251 + + + + + h h hibitory protein (NAIP) 1 AB002341 + + + + + + + 1	Neurofibromin 2 (bilateral	1	S73853		+	T			+	
inhibitory protein (NAIP) neuronal cell adhesion 1 AB002341 + + + +	acoustic neuroma) (NF2)	<u> </u>		<u> </u>			1	1		<del></del>
neuronal cell adhesion 1 AB002341 + + + + +	neuronal apoptosis	2	U19251	+	+	+	ļ		+	1
	inhibitory protein (NAIP)	<u></u>		<del></del>	<del> </del>	<del> </del>	+	↓	4-	<del> </del>
MOJECUJE (NKCAM)		1	AB002341	İ	1 +	1 *	+	1	1 *	I
	molecule (NRCAM)	<u>l</u>	1	<u> </u>	<u> </u>	1	1		ــــــــــــــــــــــــــــــــــــ	

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neuropathy target esterase (NTE)	1	AJ004832		+	+	+ .		+	
neuropeptide Y3 receptor, 5'UTR (low score)	1	D28433				7.			
neurotrophic tyrosine kinase, receptor, type 1 (NTRK1)	14.	X03541	+	+	+	+	+	+	
neutrophil cytosolic factor 4 (40kD)	2	U50720							
NG31	1.	AF129756							
NGAL (=X83006)	1	X99133				•			
nibrin (NBS)	1	AF051334							
NIK	1	AB014587		+	+	+		+	
Ninjurin 1; nerve injury- induced protein-1	1	U72661		+	+	+		+	
nitrilase 1 (NIT1) (=AF069984)	· 1	AF069987							
NKG2-D (low match) (non- exact, 58%)	1	X54870							
Nmi	1	U32849					7		
N-myristoyltransferase 1 (NMT1)	1	AF043324		+	+	+	+	+	
No arches-like (zebrafish) zinc finger protein (NAR)	1.	U79569		+	- 0	+		+	
non-histone chromosome protein 2 (S. cerevisiae)- like 1 (NHP2L1)	1	D50420	+	+	+	+	+	+	·
non-muscle (fibroblast) tropomyosin	1								
non-muscle alpha-actinin	1	U48734				<b></b>	1		
non-muscle myosin alkali light chain (Hs.77385)	3	M22918	+	+	+	.*.	+	+	High in fetal adrenal gland and BPH stroma
non-neuronal enclase (EC 4.2.1.11)	1	X16289							- Control
non-receptor tyrosine phosphatase 1	1	M33689							
normal keratinocyte substraction library mRNA, clone H22a	3	. X53778	+	+	+	+	+	+	high in many libraries
notch group protein (N)	3	M99437							
novel protein	1.	X99961						$\top$	
novel T-cell activation	1	X94232	•	+	+	+		+	
N-ras protein NRU	1	A60196	-						
N-sulfoglucosamine sulfohydrolase (sulfamidase) (SGSH)	1	U60111	*	+				+	
insulin induced gene 1 (INSIG1)	1	U96876	+	+	+	+	+	+	
ntegrin, alpha 4 (antigen CD49D, alpha 4 subunit of	3 .	L12002	+			+			
VLA-4 receptor) (ITGA14) Interferon, gamma-inducible	1	M63838	+	+	+	+	$\vdash$	+	
protein 16 (IFI16) Interleukin 1, beta (IL1RB)	1	M15330		+	-	$\vdash$	$\vdash$	+	<del> </del>
nuclear antigen H731-like	2	U83908		+	+	+	十一	+	<del> </del>
protein nuclear antigen Sp100	4	U36501	+	+ .	-	+	+	+	
(SP100) Nuclear antigen Sp100	1	P23497		-		-	+	-	
(SP100) (85%aa) Nuclear antigen Sp100	1	P23497		-	·	-	$\vdash$	$\vdash$	<del> </del>
(SP100) (89%aa) nuclear autoantigenic	1	M97856	+		· +	$\vdash$	$\vdash$	-	
sperm protein (histone- binding) (NASP)									

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nuclear corepressor KAP-1 (KAP-1) (=U95040; X97548 TIF1beta zinc finger protein)	1	U78773							
Nuclear domain 10 protein (NDP52)	4	U22897	+	+	+	+	+.	+	
Nuclear factor (erythroid- derived 2)-like 2 (NFE2L2)	1	S74017		. +	+	+	+	+	
Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1	2	M58 <b>603</b>	•	+	+		.+	+	
(p105) (NFKB1) nuclear factor of kappa light polypeptide gene	3	M69043		+	*+	+	·	+	<u> </u>
enhancer in B-cells in histor, alpha (NEKBIA) Inuclear factor related to	1	U08 <b>191</b>		+	+	+		+	
kappa B binding protein (NFRKB)									
nuclear mitotic apparatus protein 1 (NUMA1)	3	Z11583	+	+	+	+	+	+	
nuclear receptor coactivator 2 (GRIP1)	1	X97674							
nuclear receptor coactivator 3 (AIB3)	2	AF010227	+	+	+		ļ	+	
nuclear receptor coactivator 4 (ELE1)	22	X77548		+	+	+	+	+	
nuclear receptor interacting protein 1 (NRIP1)	1	X84373		+		+		+	
nuclear respiratory factor 1 (NRF1)	1	U02683	В	+	. +			<u> </u>	
nuclear RNA helicase, DECD variant of DEAD box family (DDXL)	4	U90426	*	+	+	+		+	
nuclear transcription factor Y, alpha (NFYA)	1	X59711	В						
nuclear transcription factor, X-box binding 1 (NFX1)	3	U15306		+	+	L	+		
nuclear transport factor 2 (placental protein 15) (PP15)	1	X07315	+	+	+	+		+	0.
nucleobindin (=M96824)	1	U31336	·						
nucleobindin 1 (NUCB1)	2	M96824	+.	+.	+	+		+	
nucleolar phosphoprotein p130 (P130)	1	Z34289		+	+				
nucleolar protein (KKE/D repeat) (NOP56)	1	Y12065	+	+	+	+		+	
nucleolar protein (MSP58)	1	AF015308							
nucleolar protein 1 (120kD) (NOL1)	1	M32110	+	+ .					
nucleolar protein p40	1	U86602	+	+	+	+		+.	
nucleolin (NCL)	2	M60858	+	+	+	+		+	
nucleophosmin (nucleolar phosphoprotein B23, numatrin) (NPM1)	14	M28699	+	+	+	+		+	
nucleophosmin-retinoic acid receptor alpha fusion protein NPM-RAR long form	1	U41742							
nucleoporin (NUP358) (=D42063 RanBP2 (Ran- binding protein 2))	2	L41840							
nucleoporin 153kD (NUP153)	1	Z25535	·			_	-		
nucleoporin 98kD (NUP98)	1	U41815							<u> </u>
nucleosome assembly protein	1	D28430							
nucleosome assembly protein 1-like 1 (NAP1L1)	1	M86667		+	+	+		+	
nucleosome assembly protein 1-like 4 (NAP1L4)	2	U77456	+	+	+	+		+	

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nucleosome assembly protein, 5'UTR	. 1	D28430			. ·				
olfactory receptor (OR7- 141)	1	U86281							
OLFACTORY RECEPTOR- LIKE PROTEIN HGMP07E (OR17-4) (non-exact 65%)	1 ·	P34982					•		
oligodendrocyte myelin glycoprotein (OMG)	7	L05367		+					
Ö-linked N- acetylglucosamine (GlcNAc) transferase	1	U77413	+	+		+	+	+	
(UDP-N- acetylglucosamine:polypep tide-N-acetylglucosaminyl transferase) (OGT)		. ,		. •					
oncofetal trophoblast glycoprotein 5T4 precursor (non-exact 55%)	1	A53531					•		
Oncogene TIM (TIM) (non- exact 84%)	. 1	U02082				·		٠,٠	
ORF (Hs.77868)	1	M68864	+	.+	+	+	+	+	
ORF1; MER37; putative transposase similar to pogo element Length = 454	• •	U49973			•				
origin recognition complex, subunit 2 (yeast homolog)- like (ORC2L)	2	U27459				+	,		
origin recognition complex, subunit 4 (yeast homolog)- like (ORC4L) (low match)	1	AF022108							
					_	_			
ornithine aminotransferase (gyrate atrophy) (OAT)	2	M23204		+	+	+			
ornithine aminotransferase (gyrate atrophy) (OAT) ornithine decarboxylase (ODC)	1	M20372				·			ů.
ornithine aminotransferase (gyrate atrophy) (OAT) ornithine decarboxylase		M20372 D78361	+	+	+	+	+	+	High in pancreas, and activated T cells
ornithine aminotransferase (gyrate atrophy) (OAT) ornithine decarboxylase (ODC) ornithine decarboxylase antizyme, ORF 1 and ORF 2 orphan receptor	1	M20372	+			·	+	+	
ornithine aminotransferase (gyrate atrophy) (OAT) ornithine decarboxylase (ODC) ornithine decarboxylase antizyme, ORF 1 and ORF 2	11	M20372 D78361	· ·	+	+	+	+		
ornithine aminotransferase (gyrate atrophy) (OAT) ornithine decarboxylase (ODC) ornithine decarboxylase antizyme, ORF 1 and ORF 2 orphan receptor (Hs.100221) OS-9 precurosor osteonectin (=X82259 BM-	1 11 2	M20372 D78361 U07132	<del></del>	+	+	+		+	
ornithine aminotransferase (gyrate atrophy) (OAT) ornithine decarboxylase (ODC) ornithine decarboxylase antizyme, ORF 1 and ORF 2 orphan receptor (Hs.100221) OS-9 precurosor osteonectin (=X82259 BM-40) ovel centrosomal protein	1 11 2 6	M20372 D78361 U07132 AB002806	<del></del>	+	+	+		+	
ornithine aminotransferase (gyrate atrophy) (OAT) ornithine decarboxylase (ODC) ornithine decarboxylase antizyme, ORF 1 and ORF 2 orphan receptor (Hs.100221) OS-9 precurosor osteonectin (=X82259 BM-40) ovel centrosomal protein RanBPM (RANBPM) over-expressed breast	1 11 2 6 1	M20372 D78361 U07132 AB002806 D28381	<del></del>	+	+	+ +		+	
ornithine aminotransferase (gyrate atrophy) (OAT) ornithine decarboxylase (ODC) ornithine decarboxylase antizyme, ORF 1 and ORF 2 orphan receptor (Hs.100221) OS-9 precurosor osteonectin (=X82259 BM-40) ovel centrosomal protein RanBPM (RANBPM) over-expressed breast tumor protein oviductal glycoprotein 1,	1 11 2 6 1	M20372 D78361 U07132 AB002806 D28381 AB008515	<del></del>	+	+	+ +		+	
ornithine aminotransferase (gyrate atrophy) (OAT) ornithine decarboxylase (ODC) ornithine decarboxylase antizyme, ORF 1 and ORF 2 orphan receptor (Hs.100221) OS-9 precurosor osteonectin (=X82259 BM-40) ovel centrosomal protein RanBPM (RANBPM) over-expressed breast tumor protein oviductal glycoprotein 1, 120kD (OVGP1) oxidase (cytochrome c)	1 11 2 6 1 1 1	M20372 D78361 U07132 AB002806 D28381 AB008515 L34839	<del></del>	+	+ + +	+ + +	+	+	
ornithine aminotransferase (gyrate atrophy) (OAT) ornithine decarboxylase (ODC) ornithine decarboxylase antizyme, ORF 1 and ORF 2 orphan receptor (Hs.100221) OS-9 precurosor osteonectin (=X82259 BM-40) ovel centrosomal protein RanBPM (RANBPM) over-expressed breast tumor protein oviductal glycoprotein 1, 120kD (OVGP1) oxidase (cytochrome c) assembly 1-like (OXAIL) oxogiutarate dehydrogenase (lipoamide)	1 11 2 6 1 1 1 1 1	M20372 D78361 U07132 AB002806 D28381 AB008515 L34839 U09550	<del></del>	+ + +	+ + + +	+ + +	+	+	
ornithine aminotransferase (gyrate atrophy) (OAT) ornithine decarboxylase (ODC) ornithine decarboxylase antizyme, ORF 1 and ORF 2 orphan receptor (Hs.100221) OS-9 precurosor osteonectin (=X82259 BM-40) ovel centrosomal protein RanBPM (RANBPM) over-expressed breast tumor protein oviductal glycoprotein 1, 120kD (OVGP1) oxidase (cytochrome c) assembly 1-like (OXAIL) oxoglutarate dehydrogenase (lipoamide) (OGDH) oxysterol binding protein	1 11 2 6 1 1	M20372 D78361 U07132 AB002806 D28381 AB008515 L34839 U09550 X80695	<del></del>	+ + +	+ + + + + +	+ + +	+	+	
ornithine aminotransferase (gyrate atrophy) (OAT) ornithine decarboxylase (ODC) ornithine decarboxylase antizyme, ORF 1 and ORF 2 orphan receptor (Hs.100221) OS-9 precurosor osteonectin (=X82259 BM-40) ovel centrosomal protein RanBPM (RANBPM) over-expressed breast tumor protein oviductal glycoprotein 1, 120kD (OVGP1) oxidase (cytochrome c) assembly 1-like (OXAIL) oxoglutarate dehydrogenase (lipoamide) (OGDH) oxysterol binding protein (OSBP)	1 11 2 6 1 1 1 1 4	M20372 D78361 U07132 AB002806 D28381 AB008515 L34839 U09550 X80695 D10523 M86917 X70394	+	+ + + + + + + + + + + + + + + + + + + +	+ + + + + +	+ + +	+ + + +	+	
ornithine aminotransferase (gyrate atrophy) (OAT) ornithine decarboxylase (ODC) ornithine decarboxylase antizyme, ORF 1 and ORF 2 orphan receptor (Hs.100221) OS-9 precurosor osteonectin (=X82259 BM-40) ovel centrosomal protein RanBPM (RANBPM) over-expressed breast tumor protein oviductal glycoprotein 1, 120kD (OVGP1) oxidase (cytochrome c) assembly 1-like (OXAIL) oxogiutarate dehydrogenase (lipoamide) (OGDH) oxysterol binding protein (OSBP)	1 11 2 6 1 1 1 1 4	M20372 D78361  U07132 AB002806 D28381 AB008515 L34839 U09550 X80695 D10523  M86917 X70394 X70394	+	+ + + + + + + + + + + + + + + + + + + +	+ + + + + +	+ + + + +	+ + + +	+ + +	
ornithine aminotransferase (gyrate atrophy) (OAT) ornithine decarboxylase (ODC) ornithine decarboxylase antizyme, ORF 1 and ORF 2 orphan receptor (Hs.100221) OS-9 precurosor osteonectin (=X82259 BM-40) over centrosomal protein RanBPM (RANBPM) over-expressed breast tumor protein oviductal glycoprotein 1, 120kD (OVGP1) oxidase (cytochrome c) assembly 1-like (OXAIL) oxoglutarate dehydrogenase (lipoamide) (OGDH) oxysterol binding protein (OSBP) OZF (non-exact zinc finger) p21/Cdc42/Rac1-activated kinase 1 (yeast Ste20-related) (PAK1)	1 11 2 6 1 1 1 1 1 1 1 1 2 2 1 1 1 1 1 2 1	M20372 D78361 U07132 AB002806 D28381 AB008515 L34839 U09550 X80695 D10523 M86917 X70394 X70394 U51120	+	+ + + + + + + + + + + + + + + + + + + +	+ + + + + +	+ + + + +	+ + + +	+ + +	
ornithine aminotransferase (gyrate atrophy) (OAT) ornithine decarboxylase (ODC) ornithine decarboxylase antizyme, ORF 1 and ORF 2 orphan receptor (Hs.100221) OS-9 precurosor osteonectin (=X82259 BM-40) ovel centrosomal protein RanBPM (RANBPM) over-expressed breast tumor protein oviductal glycoprotein 1, 120kD (OVGP1) oxidase (cytochrome c) assembly 1-like (OXAIL) oxoglutarate dehydrogenase (lipoamide) (OGDH) oxysterol binding protein (OSBP) OZF (non-exact zinc finger) p21/Cdc42/Rac1-activated kinase 1 (yeast Ste20-related) (PAK1) P35-related protein (= S80990 ficolin)	1 1 1 1 1 1 1 2 2 1 1	M20372 D78361  U07132 AB002806 D28381 AB008515 L34839 U09550 X80695 D10523 M86917 X70394 X70394 U51120 D63392	+	+ + + + +	+ + + + + +	+ + + + +	+ + + +	+ + +	
ornithine aminotransferase (gyrate atrophy) (OAT) ornithine decarboxylase (ODC) ornithine decarboxylase antizyme, ORF 1 and ORF 2 orphan receptor (Hs.100221) OS-9 precurosor osteonectin (=X82259 BM-40) ovel centrosomal protein RanBPM (RANBPM) over-expressed breast tumor protein oviductal glycoprotein 1, 120kD (OVGP1) oxidase (cytochrome c) assembly 1-like (OXAIL) oxoglutarate dehydrogenase (lipoamide) (OGDH) oxysterol binding protein (OSBP) OZF (non-exact zinc finger) p21/Cdc42/Rac1-activated kinase 1 (yeast Ste20-related) (PAK1) P35-related protein (= S80990 ficotin) p40	1 11 2 6 1 1 1 1 1 1 2 1 1 1 2 1 1 1 1 1	M20372 D78361 U07132 AB002806 D28381 AB008515 L34839 U09550 X80695 D10523 M86917 X70394 X70394 U51120 D63392 U93569	+	+ + + + +	+ + + + + +	+ + + + +	+ + + +	+ + +	and activated T cells
ornithine aminotransferase (gyrate atrophy) (OAT) ornithine decarboxylase (ODC) ornithine decarboxylase antizyme, ORF 1 and ORF 2 orphan receptor (Hs.100221) OS-9 precurosor osteonectin (=X82259 BM-40) over centrosomal protein RanBPM (RANBPM) over-expressed breast tumor protein oviductal glycoprotein 1, 120kD (OVGP1) oxidase (cytochrome c) assembly 1-like (OXAIL) oxoglutarate dehydrogenase (lipoamide) (OGDH) oxysterol binding protein (OSBP) OZF (non-exact zinc finger) p21/Cdc42/Rac1-activated kinase 1 (yeast Ste20-related) (PAK1) P35-related protein (= S80990 ficolin) p40 p40phox (=U50720)	1 11 2 6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	M20372 D78361 U07132 AB002806 D28381 AB008515 L34839 U09550 X80695 D10523 M86917 X70394 X70394 U51120 D63392 U93569 X77094	+	+ + + + +	+ + + + + +	+ + + + +	+ + + +	+ + +	
ornithine aminotransferase (gyrate atrophy) (OAT) ornithine decarboxylase (ODC) ornithine decarboxylase antizyme, ORF 1 and ORF 2 orphan receptor (Hs.100221) OS-9 precurosor osteonectin (=X82259 BM-40) over centrosomal protein RanBPM (RANBPM) over-expressed breast tumor protein oviductal glycoprotein 1, 120kD (OVGP1) oxidase (cytochrome c) assembly 1-like (OXAIL) oxogiutarate dehydrogenase (lipoamide) (OGDH) oxysterol binding protein (OSBP) OZF (non-exact zinc finger) p21/Cdc42/Rac1-activated kinase 1 (yeast Ste20-related) (PAK1) P35-related protein (= S80990 ficolin) p40 p40phox (=U50720) P47 LBC oncogene	1 11 2 6 1 1 1 1 1 2	M20372 D78361 U07132 AB002806 D28381 AB008515 L34839 U09550 X80695 D10523 M86917 X70394 X70394 V51120 D63392 U93569 X77094 U03634	+	+ + + +	+ + + + +	+ + + + +	+ + + +	+ + +	and activated T cells
ornithine aminotransferase (gyrate atrophy) (OAT) ornithine decarboxylase (ODC) ornithine decarboxylase antizyme, ORF 1 and ORF 2 orphan receptor (Hs.100221) OS-9 precurosor osteonectin (=X82259 BM-40) over centrosomal protein RanBPM (RANBPM) over-expressed breast tumor protein oviductal glycoprotein 1, 120kD (OVGP1) oxidase (cytochrome c) assembly 1-like (OXAIL) oxoglutarate dehydrogenase (lipoamide) (OGDH) oxysterol binding protein (OSBP) OZF (non-exact zinc finger) p21/Cdc42/Rac1-activated kinase 1 (yeast Ste20-related) (PAK1) P35-related protein (= S80990 ficolin) p40 p40phox (=U50720)	1 11 2 6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	M20372 D78361 U07132 AB002806 D28381 AB008515 L34839 U09550 X80695 D10523 M86917 X70394 X70394 U51120 D63392 U93569 X77094	+	+ + + + +	+ + + + + +	+ + + + +	+ + + +	+ + +	and activated T cells

WO 00/40749							•	•	C1/CA00/00005
p62 nucleoponn	1	X58 <b>521</b>							N N
p63 mRNA for transmembrane protein	1	X69910	+	+	+	+		+	
PAC clone DJ0701016 from 7q33-q36 (non-exact 54%)	1 .	007108		·					÷
palmitoyl-protein thioesterase (ceroid-	10	U44772		+	+	+		+	
lipofuscinosis, neuronal 1, infantile; Haltia-Santavuon disease) (PPT)									
papillary renal cell carcinoma (translocation- associated) (PRCC)	1 .	X99 <b>720</b>	· +	+	+	+	+	+	,
PAR protein	1	AF115850		+.		+			
partial EST (Course c-TghO4)	. 1114	243627		1		<u> </u>	Ī	- 37	111
PAX3/forkhead transcription factor gene fusion	1	U02368							
paxillin (PXN)	4	D86862	7	+	+	+		+	
PBK1 protein	2	AJ007398	+	+	+	+		+	
PBS-EST (nz92e01.s1 NCI_CGAP_GCB1 clone IMAGE:1302936) (low	. 1	AA732534	,						
score)					·				
PDZ domain protein (Drosophila inaD-like) (INALD)	1	AJ224747	+			+		+	
PEBP2aC Runt domain encoding gene (=Z35728)	1	Z38108 .							
peptidase D (PEPD)	1	J04605	•					L	
peptidylprolyl isomerase A (cyclophilin A) (PPIA)	3	Y00052		+	+	+	+		high in many libraries
peptidylprolyl isomerase D (cyclophilin D) (PPID)	2	L11667	Т ,	+	+	<u> </u>	+	+	
peptidylprolyl isomerase E (cyclophilin E) (PPIE)	1	AF042386		+	+		+	+	
PERB11.1 (=U56942 MHC class I chain-related protein A)		U69630	,						
perforin 1 (preforming protein) (PRF1)	14	M28393							
peroxisomal acyl-CoA thioesterase (PTE1)	2	X86032							•
Peroxisomal acyl- coenzyme A oxidase	1	X71440	·	+	+	+	+	+	
peroxisomal farnesylated protein (PXF)	1	X75535		+	+	+	+	+	
phorbol-12-myristate-13- acetate-induced protein (PMAIP1)	÷	D90070	B, W						
phosphate carrier (mitochondrial gene?)		X77337			·	L		<u></u>	
Phosphate carrier, mitochondrial (PHC)	3	X60036	+	+ .		+		+	
phosphate cytidylyltransferase 1, choline, alpha isoform (PCYT1A)	1	L28957	T -		+		+		-
PHOSPHATIDATE CYTIDYLYLTRANSFERAS E (CDP-DIGLYCERIDE)	1	Q92903							
phosphatidylinositol 3- kinase delta catalytic subunit	2	U57843							
phosphatidylinositol 4- kinase, catalytic, beta polypeptide (PIK4CB)	3	AB005910	+	+	+	+		+	
phosphatidylinositol glycan, class H (PIGH)	1	L19783			+	+	+	+	

VV 0 00/40/49			•						
phosphalidylinositol transfer protein (PI-TPbeta)	. 2	D30 <b>037</b>			=0				
phosphatidylinositol	2	X986 <b>54</b>	В, Т	+					,
transfer protein,		•	lymphoma				.		·
membrane-associated (PITPNM)	•								
phosphatidylinositol	1	X98654							
transfer protein.			i						
membrane-associated		• •		ļ ·					
(PITPNM) (non-exact 64%)	*		<u> </u>	<u> </u>	<u>.</u>				
phosphatidylinositol-4-	1 .	U14957	1		+		+	•	7
phosphate 5-kinase, type									·
phosphatidylinositol-4-		U8 <b>5245</b>	<del>                                     </del>	. +	. +	+		+	
phosphate 5-kinase, type	'	000240			'	' '			
II. beta (PIP5K2B)						1			·
phosphodiesterase 7A	1	L12052	B, W	+	+		+		
(PDE7A)			1.	L					
phosphodiesterase IB	1	U56976		l or	ILY	, ,	1		69
(PDES1B)	2	M83088	<b>↓</b>	+	1 '+	+		+	
phosphoglucomutase 1 (PGM1)	2	MOSOO		_	۲.			_	
phosphogluconate	1	U30255		<del> </del> -	+				
dehydrogenase (PGD)						l i			
phosphoglycerate kinase 1	12	√00572							
(PGK1)			1					<u> </u>	
phosphoglycerate mutase	-3	J04173	+	+	+	+	+	+	•
1 (brain) (PGAM1)		(AEEC70		+	-	· ·	<u> </u>	+	
phosphoglycerate mutase	1	M55673	1	*	+		l	*	
2 (muscle) (PGAM2) phosphoinositide-3-kinase,	1	Z29090	<del>                                     </del>	+	+	+	<del></del>	<del> </del>	
catalytic, alpha polypeptide	. '	223080		'		i ' i			
(PIK3CA)									
phosphoinositide-3-kinase,	4	U86453	1	+	+	+		+	
catalytic, delta polypeptide	٠.	·	1		1				
(PIK3CD)			·		<u> </u>			<u></u>	
phosphoinositide-3-kinase,	1	X83368		ł	1		l	1	
catalytic, gamma polypeptide (PIK3CG)		,		1	1				
phospholipase C		X14034	<del>                                     </del>		$\vdash$			-	
l' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '		U09117	ļ	+	+			+	
phospholipase C, delta 1 (PLCD1)	. 2	009117	1	T .	T .	+.		*	
phospholipase C, gamma 1	1	M34667	+	+	+	+	<del> </del>	+	
(formerly subtype 148)	· '	1115-1001	1		ł .			<u> </u>	
(PLCG1)	1				1		ļ		
phospholipid scramblase	1	AF008445				i			
phosphoribosyl	1	D61391	<del>                                     </del>	+	+	<del>                                     </del>		+	
pyrophosphate synthetase-			` <b> </b>						(8)
associated protein 1		* .		١.	l ·	1	٠.		
(PRPSAP1)			<u> </u>					Ŀ	
phosphoribosylglycinamide	3	X54199		+ .	+	+	+	+	
formyltransferase,  phosphoribosylglycinamide	Ι .			· ·	1		1		· ·
pnospnonbosyigiyanamide i synthetase,	i				Ì	1		l	
phosphoribosylaminoimida	1						1	1	
zole synthetase (GART)	1		L	<u>L</u>	Ŀ	L	L		
phosphorylase kinase,	3	D38616		+	+	+	+	+	
alpha 2 (liver), glycogen	1			l	1	1		1	
storage disease IX	1	· · .						1	1
(PHKA2)		U47025	+	+	-	$\vdash$	<del>                                     </del>	╁	<del></del>
phosphorylase, glycogen; brain (PYGB)	1	04/025		*	T	'		ľ	
phosphorylase, glycogen;	1 - 1	U47025	<del> </del>	+	+-	-	<del>                                     </del>	t	
brain (PYGB) (low match,		0.77020	1					·	
non-exact, 75%)				ļ			LĖ	Ι.	· <u> </u>
phosphorylase, glycogen;	1	Y15233	T	+	+	+		+	•
liver (Hers disease,				ŀ	l ·	1	1		
lycogen storage disease			1		<u> </u>	Ì	1		
type VI) (PYGL)	ļ	<u> </u>	<del> </del>	<b></b>	<u> </u>	₩-	<b>!</b>	├-	
phosphorylation regulatory	2					1	1	1	:
protein HP-10 phosphotidylinositol	1-1	D30036	+	+-	+	+	<del>                                     </del>	+	·
transfer protein (PITPN)	'	230030		lĺ	`	1 ်	1	1	l· ·
manister protein (1 171 14)		t			1		I		

pigment epithelium-derived factor (PEDF)	1	U29953	+ :	+	+	+	+	+	
pim-1 oncogene (PIM1)	1	M24779	+	+	+			+	
pinin, desmosome associated protein (PNN)	1.	U77718		В,	mon	ocyte	è, Т	ymp	noma
placenta (Diff33)	5	U49188		+	+	+	,	+	
placenta (Diff33) (non- lexact, 69%)	1	U49188		7					
placenta (Diff48)	18	U49187	+ -			-	<del> </del>	-	· · · · · · · · · · · · · · · · · · ·
placenta (Diff48) (low match)	1	U49187					-		w (4)
placenta(Diff48) (low ·	1	U49187					-		
plasminogen activator, urokinase receptor	1	X74039		+		+		+	• ,
(PLAUR) platelet factor 4 (PF4)	1	M25897			+	├	ļ	+	
platelet/endothelial cell	8	M37780		+	+	+	+	+	
adhesion molecule (CD31 Intigen) (PECAM1)			. •		*	•		•	
platelet-activating factor acetylhydrolase 2 (40kD) (PAFAH2)		U89386		+	+	+		1	
platelet-activating factor acetylhydrolase, isoform lb,	1	U72342	+	+	. +	+	+	+	
alpha subunit (45kD) (PAFAH1B1)	•		•						
platelet-activating factor receptor (PTAFR)	. 1	D10202		+				+	
pleckstrin (PLEK)	10	X07743	-		+	+		+	
pleckstrin (PLEK) (low match)	1	X07743							
pleckstrin homology, Sec7 and coiled/coil domains 1(cytohesin 1) (PSCD1)	4.	M85169	+	+		+		+	
pleckstrin homology, Sec7 and coiled/coil domains, binding protein (PSCDBP)	4	L06633	+			+			
pM5 protein	1	. X57398	+	+	+	+		+	······································
РМР69	2	Y14322	<del></del>	-					
poly (ADP-ribose)	1	X56140					├	-	
polymerase (NAD (+) ADP- ribosyltransferase) (=X16674)		- ( )							
poly(A) polymerase (PAP)	1	X76770	+	+	+	+	_	+	
poly(A)-binding protein-like 1 (PABPL1)	19	Y00345	+	+	+	+	+	+	
poly(rC)-binding protein 1 (PCBP1)	3	X78137	+	+	+	+	+	+	
polyadenylate binding protein	1 ·	U75686							
polycystic kidney disease 1 (autosomal dominant) (PKD1)	5	U24498					-		
polymerase (DNA directed), beta (POLB)	1	D29013		+			+	+	
polymerase (DNA directed), gamma (POLG)	6	D84103					-		
polymerase (RNA) II (DNA directed) polypeptide A (220kD) (POLR2A)	1	X63564	.+	+	+	+	+	+	
polymyositis/scleroderma autoantigen 2 (100kD)	1	L01457	+	+	+	+	+	+	
(PMSCL2) polypynmidine tract binding protein (heterogeneous nuclear ribonucleoprotein I) (PTB)	1	X65372	+	+	.+	+	+	+	

									1/CA00/00005
positive regulator of programmed cell death ICH-1L (Ich-1)	3	U13021			+.				
postmeiotic segregation increased 2-like 12 (PMS2L12)	1	M16514	+	+	+	+		+	
postmeiotic segregation increased 2-like 8	1 .	U38964	+	+	+	+		+	
(PMS2L8) potassium inwardly- rectifying channel,	1	D87291				+		+	
subfamily J, member 15 (KCNJ15) potassium voltage-gated	1	AF051426	·.	+	+			+	
channel, KQT-like subfamily, member 1	;	A1 001420			·		٠	,	
(KCNQ1) POU domain, class 2, associating factor 1 (POU2AF1)	1	Z49194				+			
POU domain, class 2, transcription factor 1 (POU2F1)	2	X13403		+		+	7 .		3
PPAR binding protein (PPARBP)		Y13467	+	+	+	+		+	
PPAR gamma2	1	D83233							
pre-B-cell colony- enhancing factor (PBEF)	8	U02020							·
prefoldin 1 (PFDN1)	1	Y17392	+	+	+	+	+	+	
prefoldin 5 (PRFLD5)	3	D89667	В	+	+		+		
prefoldin subunit 3 (=U96759 von Hippel- Lindau binding protein	. 1	Y17394			. '				
(VBP-1)) pregnancy-associated plasma protein A (PAPPA)	1	U28727		+		+	-		high in placenta
pre-mRNA splicing factor SF3a (60kD), similar to S.	1	U08815	+	+	+	+		+	·
cerevisiae PRP9 (spliceosome-associated protein 61) (SF3A60)	•						] :		
pre-mRNA splicing factor SF3a (60kD), similar to S. cerevisiae PRP9	1	U08815							* *
(spliceosome-associated protein 61) (SF3A60) (low score)									
pre-mRNA splicing factor SRp20, 5'UTR	2	D28423		L_			·	+	
preprotein translocase (TIM17)	3	X97544	*.	+	+	+			
prion protein	1	X82545						<u>L</u>	
prion protein (p27-30) (Creutzfeld-Jakob disease, Gerstmann-Strausler- Scheinker syndrome, fatal	1	M13899		+		+		+	
familial insomnia) (PRNP) pristanoyl-CoA oxidase	1 .	Y11411		-	-	-	-	-	
(low match) pristanoyl-CoA oxidase	1	Y11411		-	1		-	-	
(low score) procollagen-lysine, 2-	1	M98252	<u> </u>	+	+	+		+	·
oxoglutarate 5- dioxygenase (lysine hydroxylase, Ehlers-Danlos syndrome type VI) (PLOD)	1-0								
procollagen-proline, 2- oxoglutarate 4- dioxygenase (proline 4- hydroxylase), alpha polypeptide 1 (P4HA1)	1	M24486	+	+	+	+	+	+	

									1/CA00/00005
procollagen-proline, 2- oxoglutarate 4-	4	X05130	+ :	+	+	+	+	+	ė
dioxygenase (proline 4- hydroxylase), beta		*							
polypeptide (protein disulfide isomerase; thyroid hormone binding protein									. `
p55) (P4HB)									
profilin 1 (PFN1)	1 2	J03191 : U28918	+	+	+	+	+	+	
progesterone receptor- associated p48 protein (P48)			•	·		•			
prohibitin (PHB)	1	S856 <b>55</b>		+	+	+	+	+	
proliferating cell nuclear antigen (PCNA)	3	J04718	+	+	+	+		+	
gene A (natural iller-	<b>4</b>	L19184	₩ .	4. 1	; <del>†</del>	+ -	14	+	. 1
enhancing factor A) (PAGA)				<u> </u>					
proline-rich protein BstNl subfamily 2 (PRB2) (non- exact, 43%aa)	1	S62936							
proline-serine-threonine phosphatase interacting protein 1 (PSTPIP1)	1	U94778			,				
prolyl endopeptidase (PREP)	2	X74496		+		. +		+	
prolylcarboxypeptidase (angiotensinase C) (PRCP)	5	L13977		+	+	+	+	+	·
promyelocytic leukemia (PML)	1	M80185	+	+	. +	+		+	
properdin P factor, complement (PFC)	4	X57748	+						
pro-platelet basic protein (includes platelet basic protein, beta-	1	M54995	•		+	+		+	
thromboglobulin,									
tissue-activating peptide III, neutrophil-activating peptide-2) (PPBP)									
pro-platelet basic protein (includes platelet basic protein, beta-	7	M54995	+		+		+		
thromboglobulin, connective tissue- activating peptide III, neutrophil-activating									
peptide-2) (PPBP) proprotein convertase	4	U40623							
subtilisin/kexin type 7 (PCSK7)									
prosaposin (variant Gaucher disease and variant metachromatic leukodystrophy) (PSAP)	89	D00422	* <b>*</b>	+	+	+	+	*	
prostaglandin- endoperoxide synthase 1 (prostaglandin G/H synthase and	1 .	U63846	В	+		-	+	+	
cyclooxygenase) (PTGS1) prostaglandin-	2	L15326		-					
endoperoxide synthase 2 (prostaglandin G/H synthase and	-	1.5525	·						
cyclooxygenase) (PTGS2) prostaglandin-	1	D64068			<u> </u>	$\vdash$		<b> </b>	
endoperoxide synthase-1 (=L08404; U84208) (all promoters)	•								
prostate carcinoma tumor antigen (pcta-1)	2	L78132							

WO 00/40749			•	PCT/CA00/00005					
protease inhibitor 1 (anti- elastase), alpha-1-	17	K02212		+	+	+	+		high in many libraries
antitrypsin (PI) protease inhibitor 2 (anti-	1	M93056	<del></del>			+.		+	
elastase), monocyte/neutrophil (ELANH2) (low match)			• •					- 2	á
proteasome (prosome, macropain) 26S subunit, ATPase, 1 (PSMC1)	3	L02426	В .	+	+			+	
proteasome (prosome, macropain) 26S subunit, ATPase, 3 (PSMC3)		M34079	+	+	+	+		+	
proteasome (prosome, macropain) 26S subunit, ATPase, 4 (PSMC4)	2	AF020736							
proteasome (prosome, macropain) 26S subunit, ATPase, 5 (PSMC5)	5	L38810	+	+	+	+	+	+	
proteasome (prosome, macropain) 26S subunit, ATPase, 6 (PMSC6)	2	D78275	+	+	+	+	<i>;</i> ,		
proteasome (prosome, macropain) 26S subunit, non-ATPase, 11 (PSMD11)	1	AF001212		. +			+		
proteasome (prosome, macropain) 26S subunit, non-ATPase, 2 (PSMD2)	. 2	D78151	111	+	+			+	
proteasome (prosome, macropain) 26S subunit, non-ATPase, 5 (PSMD5)	1	S79862	T	+	+		+		
proteasome (prosome, macropain) 26S subunit, non-ATPase, 7 (Mov34	. 1	D50063		+		+		+	high in many libraries
homolog) (PMSD7) proteasome (prosome, macropain) 26S subunit,	1	AB003103		+	+	+		+	
on-ATPase, 12 (PMSD12) proteasome (prosome,	3	L07633	+	+	+	+		+	·
macropain) activator subunit 1 (PA28 alpha) (PSME1)		*							
proteasome (prosome, macropain) subunit, alpha type, 3 (PSMA3)	2	D00762		+	,+	+		+	
proteasome (prosome, macropain) subunit, alpha type, 5 (PSMA5)	3	X61970	+	+	+	+		+	
proteasome (prosome, macropain) subunit, alpha type, 7 (PSMA7)	3	AF054185	·	+	+ :	+	.+	+	
proteasome (prosome, macropain) subunit, alpha type, 7 (PSMA7) (low match)	1	AF022815							
proteasome (prosome, macropain) subunit, beta type, 1 (PSMB1)	1	D00761	+	+	+	+	+	+	
proteasome (prosome, macropain) subunit, beta type, 10 (PSMB10)	1	X71874	+	+		+	+	+	
proteasome (prosome, macropain) subunit, beta type, 6 (PMSB6)	1	D29012		+	+	+		+	·
proteasome (prosome, macropain) subunit, beta type, 8 (large multifunctional protease 7) (PSMB8)	·	U17497	+	+	+	+		+	
proteasome (prosome, macropain) subunit, beta type, 9 (large multifunctional protease 2) (PSMB9)	3	Z14977	*			+		+	

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proteasome (prosome, macropain) subunit, beta ype, 7 (PSMB7)	1	D38048	+	+	+	+	. +	+	
protective protein for beta- galactosidase	3	M22960	+	+	+.	+	+	+	
(galactosialidosis) (PPGB)	1	U47925		. +			•	<u></u>	
spliced form 2 (A-2) protein activator of the interferon-induced protein	1	AF072860		+	+	+		+	high in testis
kinase (PACT) protein disulfide isomerase-	2 .	D49489	+	+	+	+	+	+	
related protein (P5)	1	25441	<del>+</del>	+	+			-	·
geranylgeranyltransferase (hoe l. beta subunit (PGGT1B)	· .	4 /s 1	; ;		,	. ,			
protein homologous to chicken B complex protein, guarine nucleotide binding	20	M24194	+	+	+	+	+	+	high in many libraries
protein kinase A anchoring protein	1	AF037439		+	·				
protein kinase C substrate 80K-H (PRKCSH)	2	U50317	+	+	+	+		+	
protein kinase C, beta 1 (PRKCB1)	6	X06318	+	+	+	+		+	
protein kinase C, delta (PRKCD)	1	D10495	+	+	+	+		+	
protein kinase C, eta (PRKCH) protein kinase C, mu	1	M55284 X75756			. +		_	+	
(PRKCM) (non-exact 78%)	· 2 .	D26181	+	+	+	+		+	
(PRKCL1) protein kinase, AMP-	1	U42412	B, T	+	+.			_	
activated, gamma 1 non- catalytic subunit (PRKAG1)			lymphoma					<u></u>	
protein kinase, cAMP- dependent, regulatory, type I, alpha (tissue specific	4	M18468		+	+	+	+	+	
extinguisher 1) (PRKAR1A) protein kinase, DNA- activated, catalytic polypeptide (PRKDC)	1	<b>U47077</b>		+	+.		+	+	
protein kinase, mitogen- activated 1 (MAP kinase 1; p40, p41) (PRKM1)	1	Z11695	В	+			+		
protein kinase, mitogen- activated 6 (extracellular signal-regulated kinase, p97) (PRKM6)	1	L77964		+		+	+	+	
protein kinase, mitogen- activated, kinase 3 (MAP kinase kinase 3)	1	U66839	+	+	+	+	+		
(PRKMK3) protein phosphatase 1, catalytic subunit, alpha isoform (PPP1CA)	5	M63960	. +	+	+	+	+	+	
protein phosphatase 1, regulatory subunit 10 (PPPR10)	3	Y13247		+	+	+		+	
protein phosphatase 1, regulatory subunit 7 (PPP1R7)	2	Z50749	+	+	+	+	+	+	
protein phosphatase 2 (formerly 2A), catalytic subunit, beta isoform (PPP2CB)	1	X12656	•	+	+	+	+	+	·
protein phosphatase 2 (formerly 2A), regulatory subunit B" (PR 72), alpha isoform and (PR 130), beta isoform (PPP2R3)	1	£07590	0	7.	+	+		+	

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protein phosphatase 2, regulatory subunit B (856), alpha isoform (PPP2R5A)	2	L42373	+	+	+	+		+	
protein phosphatase 2, regulatory subunit B (B56), delta isoform (PPP2R5D)	3	D78360		+	+	+		+	
protein phosphatase 2, regulatory subunit B (B56), gamma isoform	1	D26445	. +	+	+	+		+	
(PPP2R5C) protein phosphatase 2A regulatory subunit alpha- isotype (alpha-PR65)	5	J02902	+	+	+	+		+	
protein phosphatase 4 (formerly X), catalytic subunit (PPP4C)	2	AF097996	<b>+</b>	* <b>+</b>	+	+		+	
protein tyrosine kinase 2 beta (PTK2B)	4	L49207		+.		+	, .	+	
protein tyrosine phosphatase epsilon	1	X54134							
protein tyrosine phosphatase type IVA, member 2 (PTP4A2)	2	L48723	+	+	+	+	;	+	
protein tyrosine phosphatase, non-receptor type 1 (PTPN1)	1	M31724	+	+	+	+			0.0
protein tyrosine phosphatase, non-receptor type 12 (PTPN12)	1	M93425		+	+	+		+	high in testis
protein tyrosine phosphatase, non-receptor type 12 (PTPN12) (non- exact, 70%)	1	M93425							
protein tyrosine phosphatase, non-receptor type 2 (PTPN2)	2	M25393		+	+	. +.		+	
protein tyrosine phosphatase, non-receptor type 4 (megakaryocyte) (PTPN4)	1	M68941	*		+	+		+	
protein tyrosine phosphatase, non-receptor type 6 (PTPN6)	7	· M74903	•	+	+	+		+	
protein tyrosine phosphatase, non-receptor type 7 (PTPN7)	1	D11327	+			+		+	
protein tyrosine phosphatase, receptor type, alpha polypeptide (PTPRA)	1	M34668	*	+	+	+		+	
protein tyrosine phosphatase, receptor type, c polypeptide (PTPRC)	44	Y00638	+	+		+		.+	
protein tyrosine phosphatase, receptor type, M (PTPRM)	1	X58288		+	+	+		+	
protein tyrosine phosphatase, receptor type, N polypeptide 2 (PTPRN2)	2	U81561	-	+	-	+		+	
protein with polyglutamine repeat (ERPROT213-21)	1	U94836	+	+	+	.+		+	
protein-kinase, interferon- inducible double stranded RNA dependent inhibitor (PRKRI)	1	U28424		+	+	+	÷	+	
protein-L-isoaspartate (D- aspartate) O- methyltransferase (PCMT1)	4	D13892		.+	+				
proteoglycan 1, secretory granule (PRG1)	7	J03223		+		+		+	
prothymosin, alpha (gene sequence 28) (PTMA)	12	M14483	+	+	+	+	+	+	·
<del></del>		·	4	<u> </u>					

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prp28, U5 snRNP 100 kd protein (U5-100K)	7	AF026402	+ ;	+	+	+		+	
PRP4/STK/WD splicing factor (HPRP4P)	1	AF001687		+	+	+		+	
PTK7 protein tyrosine kinase 7 (PTK7)	1	U40271		+	+	+	- 1	+	
purinergic receptor P2X, ligand-gated ion channel, 4 (P2RX4)	-3	AF000234		+	+	. +		+	
purinergic receptor P2X, ligand-gated ion channel, 7 (P2RX7)	1	, Y12851	+	·					macrophage only
puromycin-sensitive aminopeptidase (PSA)	1	Y07701		+	+.			+	
putative ATP(GTP)-binding protein	2	AJ010842		+				+	
putative brain nuclearly- targeted protein (KIAA0765)		AB018308	÷ .	+	+	+		+	
putative chemokine receptor: GTP-binding protein (HM74)	1	D10923	+						
putative dienoyl-CoA isomerase (ECH1)	1 .	AF030249							
putative G-binding protein	1	AF065393	÷ .	-					•
Putative human HLA class Il associated protein I (PHAP1)	1	U73477	В	+		·	+		
Putative L-type neutral amino acid transporter (KIAA0436)	. 1	AB007896						·	
putative mitochondrial space protein 32.1	1	AF050198							
PUTATIVE MUCIN CORE PROTEIN PRECURSOR 24 (MULTI-	1	Q04900							
GLYCOSYLATED CORE PROTEIN 24) (MGC-24) (MUC-24)									
putative nucleic acid binding protein	2	X76302	. +	+ -	+	+		+	
putative outer mitochondrial membrane 34 kDa translocase Htom34		U58970		+	+	+		+	
putative p150 (non-exact 88%)	1	U93568							·
putative translation initiation factor (SUI1)	1	L26247	<del>+</del> .	+	+	+	+	+	High in moderately differentiated colon adenocarcinoma
putative tumor suppressor protein (123F2)	1	AF061836		+	+	+		+	
рупоline 5-carboxylate reductase	1	M77836	.+	+	+	+		+	
pyruvate dehydrogenase (lipoamide) alpha 1 (PDHA1)		D90084		•	+	+	+	+	
pyruvate dehydrogenase (lipoamide) beta (PDHB)	2	J03576	+	+	+	+		+	
Pyruvate dehydrogenase complex, lipoyl-containing component X; E3-binding protein (PDX1)	3	Y13145		+	+				
pyruvate kinase, muscle (PKM2)	11 .	M23725	i				+		
RAB, member of RAS oncogene family-like (RABL)	1	U18420		+	+	1		+	
RAB1, member RAS oncogene family (RAB1)	3	M28209		+	+	+		+	
RAB11A, member RAS oncogene family (RAB11A)	2	X56740	+	+	+	+		+	high in spleen

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RAB11B, member RAS	1	D45418		+				+	: -
oncogene family (Rab11B) RAB27A, member RAS	3	U38654				+		-	
oncogene family (RAB27A) RAB5B, member RAS	1	X54871		+	<del></del> -	+	-	+	
oncogene family (RAB5B)									
RAB6, member RAS oncogene family (RAB6)	1	M28212	•	+			.	+	
RAB7, member RAS	. 1	X93499	+	+	+	+		+	
oncogene family (RAB7) RAB7, member RAS	2	D84488		+	+	+	$\dashv$	+.	
oncogene family-like 1 (RAB7L1)			-		;				
RAB9, member RAS oncogene family (RAB9)	1	U44103				·		*	
RAD50 (S. cerevisiae) homolog (RAD50)	2	U63139		+	+	+			
RAD51 (S. cerevisiae) homolog C (RAD51C)	1	AF029669		+	+	+		+	
Radin blood group (RD)	2	L03411	<del></del>	+	+	+		+	
RAE1 (RNA export 1,	3	U84720		+	+.	+	'	+	-
S.pombe) homolog (RAE1) ralA-binding protein	2	. L42542	· +	+	+	+			
(RLIP76) RAN binding protein 2-like	2	AF012086		<del>  </del>					
1 (RANBP2Ľ1)					+			+	<u> </u>
Ran GTPase activating protein 1 (RANGAP1)	3	X82260	+	Ţ	T	+			
RAN, member RAS oncogene family (RAN) (low match)	1	M31469							
RanBP2 (Ran-binding	1	D42063							
protein 2) (=U19248; L41840 sapiens									,
ransforming growth factor, beta receptor II (70-80kD)	4	D50683	+	+	+	+		+	
(TGFBR2) RAP1A, member of RAS	10	M22995	+	+	+	+	+	+	F . 7
oncogene family (RAP1A) RAR-related orphan	1	U16997						+	
receptor C (RORC) RAS guanyl releasing	1	Y12336	. +	+					
protein 2 (calcium and DAG-regulated)							·		
ras homolog gene family, member A (ARHA)	12	X05026	+	+	+	+	+	+	high in ovary
ras homolog gene family, member G (rho G) (ARHG)	1	X61587	+	+	+	+			·
ras homolog gene family.	2	Z35227	+	+	+			+	
member H (ARHH) ras inhibitor (RIN1)	2	M37191		+			_	<del>                                     </del>	
Ras-GTPase activating	2	AF053535	. +	+	+	+	$\Box$	+	
protein SH3 domain- binding protein 2									
HKIAAU66U)				1	1				
(KIAA0660)  Ras-GTPase-activating protein SH3-domain-	3	U32519	+	+	+	+		+	
Ras-GTPase-activating protein SH3-domain-binding protein (G3BP)	1		+	+	+	+		+	
Ras-GTPase-activating protein SH3-domain-binding protein (G3BP) ras-related C3 botulinum toxin substrate 2 (rho family, small GTP binding	3	U32519 M29871	+	+		+			
Ras-GTPase-activating protein SH3-domain-binding protein (G3BP) ras-related C3 botulinum toxin substrate 2 (rho family, small GTP binding protein Rac2) (RAC2) RAS-RELATED PROTEIN RAP-1B (GTP-BINDING	1		•	+		+	·		
Ras-GTPase-activating protein SH3-domain-binding protein (G3BP) ras-related C3 botulinum toxin substrate 2 (rho family, small GTP binding protein Rac2) (RAC2) RAS-RELATED PROTEIN	11	M29871	+	+		+	·		
Ras-GTPase-activating protein SH3-domain-binding protein (G3BP) ras-related C3 botulinum toxin substrate 2 (rho family, small GTP binding protein Rac2) (RAC2) RAS-RELATED PROTEIN RAP-1B (GTP-BINDING PROTEIN SMG P21B)	11	M29871 P09526	+		+		-		

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regulator of G protein signalling 6 (RGS6)	1	AF073920		+				•	
regulator of G-protein signalling 14 (RGS14)	2	AF037195	+	. +	+ .	+			٠.
regulator of G-protein signalling 2, 24kD (RGS2)	6	L13391	+	+	+	+		+.	
regulator of G-protein signalling 5 (RGS5) (49%	1	O15539		·	7		Ē		
regulatory factor X, 4 (influences HLA class II	1	м69297	<del></del>		+	+			
expression) (RFX4) regulatory factor X, 5 (influences HLA class II	. 2	X85786	T	+	+			+	
expression (RFX5) replication protein A1	1 ,	M63488	+	+	+	+		+	
(RPA1) replication protein A3 (14kD) (RPA3) (low match)	1	L07493							-
reproduction 8 (D8S2298E)	1	D83767		+	+.	+			
requiem, apoptosis response zinc finger gene (REQ)	2 .	U94585	+ .	+	+	+	٠	+	
requiem, apoptosis response zinc finger gene (REQ) (=AF001433) (low		U94585							. 6
match) restin (Reed-Steinberg cell- expressed intermediate filament-associated	7	M97501	В, Т	+	+				
protein) (RSN) retinoblastoma 1 (including	3	L11910	+	+	+	+			8
osteosarcoma) (RB1) retinoblastoma binding protein 2 homolog 1	. 1	AF087481							
(RBBP2H1)	1	S66427	+	+-		⊬		-	
protein 1 (RBBP1) retinoblastoma-binding	5	S66431	+ ·	+	+	+		+	
protein 2 (RBBP2) retinoblastoma-binding	.1	X71810		+	+	+		+	
retinoblastoma-binding	1	X74262		+	+	+	_	+	
retinoblastoma-binding	1	U35143		<del> </del>	<u> </u>	$\vdash$	-	-	· ·
retinoblastoma-like 2	1	X76061		+	+	+		+.	
(p130) (RBL2) retinoic acid receptor responder (tazarotene	1	AF060228		+	-	+	+	+	-
retinoic acid receptor.	7	X06538	. +	+	-	+		-	
alpha (RARA) retinoic acid responsive (NN8-4AG)	- 1	U50383		+	<del> </del>	+		+	
retinoid X receptor beta (RXR-beta)	2	X66424		+	+	+		+	
REV3 (yeast homolog)-like, catalytic subunit of DNA polymerase zeta (REV3L)	1	AF035537							
Rho GDP dissociation inhibitor (GDI) beta (ARHGDIB)	23	L07916	<b>+</b> .	+.	+	+	+	+	
Rho GTPase activating protein 4 (ARHGAP4)	2	. X78817	+	+					
Rho GTPase activating protein 4 (ARHGAP4) (low match)	1	P98171	-)(-						
Rho-associated, coiled-coil containing protein kinase 2	1	AB014519							,
(ROCK2)	2	U85625	+	+	+	+	+	+	

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ribonuclease 6 precursor (RNASE6PL) (low match)	. 1	U85625							
ribonuclease, RNase A family, 2 (liver, eosinophil-	-1	X55988					+		
derived neurotoxin) (RNASE2)									
ribonuclease/angiogenin	3	M36717	+	+	+	+		+	
ribonucleoside diphosphate reductase M1 subunit	1	X65708						-	
ribonucleotide reductase M2 polypeptide (non-exact 91%)	1	P31350							
ribophorin I (RPN1)	1	Y00281	+	+	+	+		+	
ribophorin II (RPN2)	7 1	Y00282	.+	+	+	+	+	+	
ribosomal 18S rRNA	3 .	M10098							
ribosomal 28S RNA	1	M11167							
ribosomal phosphoprotein P0, 5'UTR (low match) Ribosomal protein	1	D28418		ļ -,		ļ. 	ļ		
ribosomal protein L10	30 .	L25899	+	+	<u>`</u>	+	+	+	high in many libraries
(RPL10)								Ĺ	
RIBOSÓMAL PROTEIN L10A (CSA-19)	2	P53025			3		<u> </u>		
ribosomal protein L11 (RPL11)	4	X79234	+	+	+	+	+	+	Alveolar rhabdomyosarcoma
ribosomal protein L12 (RPL19)	2	L06505	+	+	+	+	+	+	
ribosomal protein L13 (PRL13)	1	P26373	+	+ 1	+	+	+	+	high in many libraries
ribosomal protein L14 (RPL14)	4	D87735	+	+	.+	†	+	+	high in many libraries
ribosomal protein L17 (RPL17)	4	X53777	·) · · +						blood only
ribosomal protein L18 (RPL18)	10	L11566	+	+	+	+		+	
ribosomal protein L18a (RPL18A)	5	L05093	•	+	+	+	+	+	High in fetal adrenal gland and skin
ribosomal protein L18a homologue	2	X80821				+			
ribosomal protein L19 (RPL19)	15	X63527	+	+	+	+	+	+	
ribosomal protein L21 (RPL21)	6	U14967	+	+	+	+	+	+	
ribosomal protein L22 (RPL22)	3	D17652	+	+	+	+		+	
ribosomal protein L23 (RPL23)	2	X55954	+	+	+	+	+	+	high in many libraries
ribosomal protein L23a (RPL23A)	5	U37230	+	+	+	+	+	+	high in many libraries
ribosomal protein L26 (RPL26)	8	X69392	. +	+	+	+	+	+	
ribosomal protein L27 (RPL27)	6	L05094	+	+	+	+		+	
ribosomal protein L27a (RPL27A)	10	U14968	+.	+	+	+	+	+	·
ribosomal protein L28 (RPL28)	6	U14969	+	+	+	+	ŀ	+	
ribosomal protein L29 (RPL29)	6	U10248	. +	+	+	+	+	+	
ribosomal protein L3 (RPL3)	81		+	+	+	+	Ŧ	+	high in many libraries
	81	X06323							
ribosomal protein L3 homologue					<del></del>	+	+	+ -	Think in homeboons
ribosomal protein L30	6	X79238	+	+	+	+	+	+	high in lymphoma
homologue	6	X79238 X79238	+	+	+	-			nigh in lymphoma

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ribosomal protein L32 (RPL32)	3	X03342	+	+	+	+	+	+:	
ribosomal protein L33-like (RPL33L)	1	AF047440		+	+	+		+	·
ribosomal protein L34 (RPL34)	5	L38941		+	+	+	+	+.	·
ribosomal protein L34 (RPL34) (low match)	1	L38941							
ribosomal protein L37 (RPL37)	5	D23661	+	+	+	+	+		high in barstead prostate
ribosomal protein L37a	4	X66699	+	+ -	+	+	+		high in many libraries
ribosomal protein L38 (PRL38)	1 .	Z26876	+	+	+	+	+		high in many libraries
ribosomal protein L4 (RPL4)	27	D23660	+	+	+	+	+	+	high in many libraries
MEOSOMEI protein £41 (RPL41)	. 4	AF035844 )	.1.4	+	+ ;	+		+	high in many libraries
ribosomal protein L5 (RPL5)	14	U14966	+	+	+	+	+	+	High in alveolar rhabdomyosarcoma
ribosomal protein L5 (RPL5) (low match)	- 1	U14966							
ribosomal protein L6 (RPL6)	7.	X69391	÷	+	+	+	+	+	high in many libraries
ribosomal protein L7 (RPL7)	14	X52967	+	+	+	+	+		high in conorm
ribosomal protein L7a (RPL7A)	15	M36072	+	+	+	+	+	+	High in uterus, and seminoma
ribosomal protein L8 (RPL8)	5	Z28407	+ .	+	+	+	+	+	high in ovary
ribosomal protein L9 (RPL9)	10	U09953		+	+	+	+	+	·
ribosomal protein S10 (RPS10)	5	U14972	+	+	+	+	+	+	high in many libraries
ribosomal protein S11 (RPS11)	4	X06617	+	+	+	+	+	+	high in many libraries
ribosomal protein S11 (RPS11) (low match)	1	AB007152			+	+	+	+	high in many libraries
ribosomal protein S12 (RPS12)	3	X53505	*			+			riigh in many libraties
nbosomal protein S13 (RPS13)	2	L01124		+	+ +	+	+	+	
(RPS14)	12	M13934	+	+	+	+	+	+	
ribosomal protein S15 (RPS15)	2	M32405	<del></del>	+	+		+	+	High in prostate
ribosomal protein S16 (RPS16)	3	M60854				+			invasive tumor
ribosomal protein S17 (RPS17)	2	M13932	+	+	+	+	+	+	high in many libraries
ribosomal protein S18	8	X69150		+	+	+	+		high in many libraries
ribosomal protein S19 (RPS19)	- 4	M81757 X17206	+	T	+	+	+	+	high in many libranes
(RPS2)			<u> </u>			Ţ	_	Ľ	ingi iii many noranes
(RPS4)	.2	P15880 L06498	+	+	+	+	+	+	high in many libraries
ribosomal protein S20 (RPS20) ribosomal protein S21	3	L00498	+	-	+	+	+	Ļ	high in CD34+/CD38-
(RP\$21)			· .				Ĺ		hematopoietic cells and skin tumor
ribosomal protein S23 (RPS23)	3	D14530		+	+	+		+	
ribosomal protein S24 (RPS24)	7	M31520	+	+	+	+	+.	*	high in uterus
ribosomal protein S25 (RPS25)	3	M64716	+	+	+	+	+	+	high in barstead prostate
ribosomal protein S26 (RPS26)	2	X69654		+	+	+	+		
ribosomal protein S27 ((metallopanstimulin 1) (RPS27)	5	U57847	+	+	+	+	+	+	

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ribosomal protein S28 (RPS28)	3	U58682	+	+	+	+		+	
ribosomal protein S29 (RPS29)	2	U14973	+	+	+	.+	+	+	
ribosomal protein S3 (RPS3)	9	X55715	+	+	+	+	+	+	high in many libraries
ribosomal protein S3 (RPS3) (low match)	1	U14990					_		
ribosomal protein S3A (RPS3A)	21	Z83334		+	+	+	+	+	high in many libraries
ribosomal protein S3A (RPS3A) (low score)	1	M77234	·		·				
ribosomal protein S4, X- linked (RPS4X)	.9.	M58458	+	+	+	+		.+	high in ovary and Synovial sarcoma
ribosomal protein S4, Y- linked (RPS4Y)	2	M58459	.+	+	+	+	+	+	
ribosomal protein S5 (RPS5)	4	U14970	+	+	+	+	+	+	high in lymphoma
RIBOSOMAL PROTEIN S6 (PHOSPHOPROTEIN INP33)	1	P10660							
ribosomal protein S6 (RPS6)	22	M20020	.+	+	+	+	+	+	
ribosomal protein S6 (RPS6) (non-exact 86%)	1	M77232	٠.						
ribosomal protein S6 kinase, 90kD, polypeptide 1 (RPS6KA1)	3	L07597	+	+	+,	+		+	
ribosomal protein S6 kinase, 90kD, polypeptide 2 (RPS6KA2)	1	X85106							*
ribosomal protein S7 (RPS7)	. 4	Z25749	-	+ :	+.	+	+	+	
ribosomal protein S8 (RPS8)	6	X67247		+	+	+	+	+	
ribosomal protein S9 (RPS9)	. 8	U14971							colon tumor
ribosomal protein, large, P0 (RPLP0)	18	M17885	T		+		·	+	
nbosomal protein, large, P1 (RPLP1)	12	M17886	1	+	+		+		·
ribosomal RNA 18S (=M10098; K03432) (=polyadenylating (sequence)	11	X03205			٠.		·		
ribosomal RNA 28S	2	M11167		1					
ribosomal RNA, 16S	1	U25123		1	<u>-</u>				<del> </del>
ring finger protein (non- exact 58%)	1	AJ001019							
ring finger protein 3 (RNF3)	1	AJ001019		1 1		<b>†</b>	<del>                                     </del>		
ring finger protein 4 (RNF4)	3	AB000468		1 + 1	+	+		+	
ring zinc-finger protein (ZNF127-Xp)	3	U41315		+	+	+	_	+	
RNA (guanine-7-) methyltransferase (RNMT)	1	AB007858		+	+	+		+	
RNA binding motif protein 5 (RBM5)	4	U23946	+	+	+	+		+	
RNA binding motif, single stranded interacting protein 2 (RBMS2)	1	D28483		+		+	•	+	
RNA helicase (putative),	1	X98743	+	+	+	+		+	
(Myc-regulated DEAD box		]		1 1					
(Myc-regulated DEAD box protein) (MRD8) RNA helicase-related		AF083255		+	+	+		+	:
(Myc-regulated DEAD box protein) (MRD8)	1 2	AF083255 X74872		+	+	+		+	·
(Myc-regulated DEAD box protein) (MRD8) RNA helicase-related protein	•			+	+	+		+	

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S100 calcium-binding	2	M81457			+ ;		+	+	
protein A10 (annexin II								l	
ligand, calpactin I, light polypeptide (p11))				¢-	0		,	l	·
(S100A10).			•					٠.	
S100 calcium-binding	1	X80201		+	. +	+		+	
protein A11 (calgizzarin) (S100A11)				·		·			
S100 calcium-binding	3	M80563	В		+		.+	l	· ·
protein A4 (calcium protein, calvasculin, metastasin,		,						·	
murine placental			:					1	
homolog)(S100A4)					<u> </u>	<u> </u>			
S100 calcium-binding protein A8 (calgranulin A)	7	M21005			+	+		+	high in bone marrow
(\$100A8)							١,		
S100 calcium-binding	14	X05233			+	+			high in invasive
protein A9 (calgranulin B)						l		١.	larynx squamous cell
(S100A9) S164 gene	1	AF 109907				<del>                                     </del>	<del> </del>	<u> </u>	carcinoma
	3	M88003	+ .	+	+	+	-	+	
S-adenosylmethionine decarboxylase 1 (AMD1)	3	14100003	•	'	• *	'		l '	
SB classii	5	M27487	+	-+	+	+	_	+	
histocompatibility antigen	٠.				١.	1			
alpha-chain SC35-interacting protein 1		AF030234	+	+	+	+	+	+	
(SRRP129)	5	∴L000524			'		`		
scaffold attachment factor	1	U72355	+	+	+	+	İ	+	
B (SAFB) scaffold attachment factor	1	U72355	<del></del>		-	-	-	·	·
B (SAFB) (non-exact 78%)	•	J72000				١.			· ·
scRNA molecule,	1	L13713							
transcribed from Alu repeat SEC14 (S. cerevisiae)-like	4	D67029		+	+	+		+	
(SEC14L)	4	D07029		T	*	T		1	
SEC23-like protein B	2	X97065	+ .	+	+.	+		+	
(SEC23B)			•		L.				, , , , , , , , , , , , , , , , , , ,
SEC63 (SEC63)	1 :	AF100141		+	+		<u> </u>	+	
secreted protein, acidic, cysteine-rich (osteonectin)	. 7	M25746	•	+	+	+	+	+	high in bone marrow stroma
(SPARC)		•	_			1			Stionia
secretory carrier	1	AF038966		+		+			
membrane protein 1			-		ŀ			l	
(SCAMP1) secretory camer	1	AF005038	+	+	+	+	+	+	
membrane protein 2		AI 000000	•	'	<u> </u>		`	`	
(SCAMP2)				<u> </u>		<u> </u>		L.	
secretory carner	1	AF005039					1		6.
membrane protein 3 (SCAMP3)								·	*
secretory granule	.1	M33649	<del> </del>				<u> </u>	Т	1
proteoglycan core (clones									
lambda-PG[6,7,8]) selectin L (lymphocyte	43	X17519	+	17		+	$\vdash$	+	:
adhesion molecule 1)	70	·	· ·			ļ .		ľ	
(SELL)				L	<u> </u>	_		<u> </u>	
selectin P ligand (SELPLG)	1	U02297	+	+					
sema domain,	2	U60800		+		+	-	+	
immunoglobulin domain (Ig), transmembrane			_			1	1		· .
domain (TM) and short						1			
cytoplasmic domain,									
(semaphorin) 4D (SEMA4D)								1	•
Ser/Arg-related nuclear	4	AF048977	<del></del>	+	+	+	+	+	
matrix protein (plenty of	•					l	ŀ		1
prolines 101-like)					l				1
(SRM160) serine palmitoyltransferase	1	Y08685		+	+	+	$\vdash$	+	
subunit I (SPTI)		. 55555			L.	L	L	Ľ	
serine palmitoyitransferase,	1	AB011098	+.	+	+	+		+	
subunit II (LCB2)				f	l	1	1	1	

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serine protease	1	J02907		Ι.	Γ	Ι.			
serine protease inhibitor,	1	U78095	+	+	+	+		+	
Kunitz type, 2 (SPINT2) serine/threonine kinase 10	1	AB015718	+	+	+	+		+	·
(STK10)								Ť	
serine/threonine kinase 19 (STK19)	1	L26260	+	+	+	+			Sec. 1
serine/threonine kinase 4 (STK4)	1	. U18297		+				+	
senne/threonine protein kinase KKIALRE	1	X66358		+	+	+		+	
(KKIALRE).	1	Y10256	<del></del>	+-	+	+		-	
kinase (NIK) SERINE/THREONINE-		P37023				<u> </u>			
PROTEIN KINASE RECEPTOR R3 PRECURSOR (SKR3)	,	F37023							
serologically defined colon cancer antigen 16 (NY-CO-	2	AF039694		1				-	1
16)							•		
serologically defined colon cancer antigen 33 (SDCCAG33)	1	AF039698	В, Т	+	+		+		
serologically defined colon cancer antigen 33 (SDCCAG33) (low score)	1.	AF039698			·				, Y.
serologically defined colon cancer antigen 33 (SDCCAG33) (low score)	1	AF039698	ή.						
serum deprivation	1	AF085481.1		1					
response (phosphatidylserine-binding protein) (SDPR) (=S67386)									
serum/glucocorticoid regulated kinase (SGK)	2	Y10032	+	+	+	+		+	
SET domain, bifurcated 1 (SETDB1)	2	D31891	+ .	+	+	-		+	
SH2 domain protein 1A, Duncan's disease	1	AF073019	T	<del> </del>			_	+	
lymphoproliferative syndrome) (SH2D1A)									
SH3 binding protein (SAB)	. 2	AB005047	+	+	+	+		+	
SH3 domain protein 1B (SH3D1B)	4	U61167	+	1		+		+	
SH3BGR PROTEIN (=21- GLUTAMIC ACID-RICH PROTEIN;21-GARP) (non-	1	P55822							
exact 82%aa) SH3-binding domain		AF042081		+	+	+	·	+	
glutamic acid-rich protein like (SH3BGRL)									
SH3-domain GRB2-like 1 (SH3GL1)	1	U65999	+	+	+	+		+	
SHC (Src homology 2 domain-containing)	2	X68148		+	+	+		+	
transforming protein 1 (SHC1)									
siah binding protein 1 (SiahBP1)	2	U51586		+	+	+		+	
siah binding protein 1 (SiahBP1) (non-exact, 69%)	1	U51586							
Sialomucin CD164 (CD164)	9	D14043	4-	ŀ			1	·	
sialophorin (gpL115, leukosialin, CD43) (SNP)	2	J04536							
sialyltransferase (STHM)	1	U14550		$\vdash$	+	+		+	
sialyitransferase 1 (beta-	2	X17247	+	+	+	+	+	+	

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sialyltransferase 4A (beta- galactosidase alpha-2,3- sialytransferase) (SIAT4A)	1	AF059321	В	+	+ ,		+	+	*
sialylfransferase 8 (alpha- 2, 8-polysialytransferase) D (SIAT8D)	1 .	L41680		+					٠.
signal peptidase 25kDa	1	L38950							
signal recognition particle 14kD (homologous Alu RNA-binding protein) (SRP14)	1	X73459	+	+	+	+	+	+	
signal recognition particle 54kD (SRP54)	1	U51920			. +	+		+	-
signal recognition particle	2	U20998	1 4	.+	+	+	+	+	. ,
signal recognition particle receptor ('docking protein') SRPR	5	X06272							
signal regulatory protein, beta, 1 (SIRP-BETA-1)	5	Y10376		+	V			+	
signal sequence receptor, alpha (translocon-	2	Z12830				+	·	+	- 44-
associated protein alpha) (SSR1)		V-74101			+	<u> </u>			
signal sequence receptor, beta (translocon- associated protein beta) (SSR2)	2	X74104	+	+	*	+		+	
signal transducer and activator of transcription (STAT5A)	4 .	L41142	+	+	+	+	+	+	
signal transducer and activator of transcription 2, 113KD (STAT2)	1	U18671						+	
signal transducer and activator of transcription 3 (acute-phase response factor) (STAT3)	3	L29277							,
signal transducer and activator of transcription 5A (STAT5A)	2	U48730	+	+.	+	+	+	+	
signal transducing adaptor molecule (SH3 domain and ITAM motif) 1 (STAM)		U43899	. ,						
silencing mediator of retinoid and thyroid hormone action (SMRT)	1	U02609	+	+					• ,
similar to beta-transducin superfamily proteins (SAZD)				<u> </u>	+	+			0.3.)
similar to S. cerevisiae SSM4 (TEB4)	300	AB011169		+	+			+	
similar to yeast pre-mRNA splicing factors, Prp1/Zer1 and Prp6	1,	AF026031		*	+	+	·	*	
SIT protein	1 .	AJ010059.1							
Sjogren syndrome antigen A1 (52kD, ribonucleoprotein	2	M62800					+		
autoantigen SS-A/Ro) (SSA1)		*		-					,
Sjogren syndrome antigen A1 (52kD, ribonucleoprotein	1	M62800							
autoantigen SS-A/Ro) (SSA1) (non-exact 63%) (match to zinc finger)									. 41
SKAP55 homologue (SKAP-HOM)	1	AJ004886	·	+	+	+		+	
skb1 (S. pombe) homolog (SKB1)	2	AF015913	+	+	+	+		+	

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skeletal muscle abundant protein	1	X87613	+	+	+	+		+	- 00
SMA3 (SMA3)	1	X83300	+	+		+		+	
small acidic protein	3	U51678	+	+	+	+.		+	,
small EDRK-rich factor 2 (SERF2)	2	Y10351	+	. +	+	+	+	+	high in fetal lung
small inducible cytokine A5 (RANTES) (SCYA5)	2	M21121		+	+	+	+	+	high in many librarie
small inducible cytokine subfamily C, member 2 (SCYC2)	1 .	D63789							
small nuclear ribonucleoprotein polypeptide B" (SNRPB2)	2	M15841		+	+	+		+	
small nuclear ribonucleoprotein polypeptide N (SNRPN)	4	, J04615	+	+	+	+	+	+	
small nuclear ribonucleoprotein polypeptides B and B1 (SNRPB)	2	J04564	+	+	+	+		+	
small nuclear RNA activating complex, polypeptide 5, 19kD (SNAPC5)		AF093593	*	+	+	+		+	
smallest subunit of ubiquinol-cytochrome c reductase	, 1	D55636	+	+	. +	+	+	+	high in fetal lung
SMC (mouse) homolog, X chromosome (SMCX)	1	L25270	+	+	+	+		+.	
SMT3B protein (2)	2	X99585	. +	+	+	+	+	+	:
SNARE protein (YKT6) (low match)	. 1	U95735			;			-	
SNC19	1	U20428					<del>                                     </del>	_	
SNC73 protein (SNC73)	2	J00220	+	+ .		+	+	+	high in many librarie
solute carrier family 1 (neutral amino acid transporter), member 5	2	U53347		+		+	·	+	
(SLC1A5) Solute carner family 11 (proton-coupled divalent metal ion transporters), member 1 (SLC11A1)	. 7	D50403	+		٠.				
solute carrier family 17 (sodium phosphate), member 3 (SLC17A3)	1	U90545				+			
solute carrier family 19 (folate transporter), member 1 (SLC19A1)	1	U17566	B, lymphoma				+		
solute carrier family 2 (facilitated glucose transporter), member 1 (SLC2A1)	1	K03195	+	+	+	.+	+	+	
solute carrier family 23 (nucleobase transporters); member 2 (SLC23A2)	3	D87075	·	+	+	+		+	
solute carner family 25 (mitochondrial carrier; exoglutarate carrier), member 11 (SLC25A11)	<u> </u>	AF070548	В, Т	+	+		+	+	
solute carrier family 31 (copper transporters), member 2 (SLC31A2)	3	U83461		+		+			
solute carrier family 4, anion exchanger, member 2 (erythrocyte membrane protein band 3-like 1) (SLC4A2)	1	X62137		+	+			•	
solute carrier family 4, sodium bicarbonate cotransporter, member 8 (SLC4A8)	1	AB018282		+					,

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solute carrier family 7 (cationic amino acid transporter, y+ system),	2	M80244	T, W	+	+		+		
member 5 (SLC7A5)		0.07429			+			+	
solute carrier family 7 (cationic amino acid	3	D87432	+	•	•			•	•
transporter, y+ system), member 6 (SLC7A6)				<u> </u>					
solute carrier family 7 (cationic amino acid	1	D87432				.			
transporter, y+ system), member 6 (SLC7A6) (non- exact 77%)									
solute carrier family 9 (sodium/hydrogen	.1 .	AF030409	-	+	+	+		+	
exchanger), isoform 6		}	-						
somatic cytochrome c	2	M22877		<del>                                     </del>					*
SON DNA binding protein (SON)	2	X63753		+	+	+		+	
son of sevenless (Drosophila) homolog 1 (SOS1)	1	L13858	+	+	٠	+			;
sorcin (SRI)	1	M32886			·				·
sortilin 1 (SORT1)	2	X98248	:	+	-	+		+	
sortilin-related receptor, L(DLR class) A repeats- containing (SORL1)	6	Y08110							
sorting nexin 1 (SNX1)	. 3	U53225	+	+	+	+		+	
sorting nexin 2 (SNX2)	2 .	AF043453		<del>                                     </del>	<del></del>	<del>                                     </del>			
sorting nexin 6 (SNX6) (=U83194.1 TRAF4- associated factor 2)	. 1	AF121856.1							
Sp3 transcription factor (SP3)	1	X68560	+	+	+	+		+	
Sp3 transcription factor (SP3)	4	M97191	+	+	+	+		+	
special AT-rich sequence binding protein 1 (binds to nuclear matrix/scaffold- associating DNA's) (SATB1)	1	М97287							
speckle-type POZ protein (SPOP)	4 .	AJ000644							
speckle-type POZ protein (SPOP) (non-exact)	1	AJ000644							
spectrin SH3 domain binding protein 1 (SSH3BP1)	6	U87166	+	+	+	+			
Spectrin, alpha, non- lerythrocytic 1 (alpha-fodrin) (SPTAN1)	2	J05243		+	+			+	
spermidine/spermine N1- acetyltransferase (SAT)	11	M55580							
spermidine/spermine N1- acetyttransferase (SAT) (non-exact, 84%)	1	U40369							
spermine synthase (SMS)	1	AD001528	+	+	+	+		+	
SPF31 (SPF31)	1	AF083190	+	+	+	+		+	
sphingomyelin phosphodiesterase 1, acid lysosomal (acid sphingomyelinase)	1	X52679		+	+		+		
(SMPD1) SPINDLIN HOMOLOG	1	Q99865		-					*
(PROTEIN DXF34) spinocerebellar ataxia 1	3	X79204	В.	+			+	$\vdash$	
(ólivopontocerebellar ataxia 1, autosomal dominant, ataxin 1) (SCA1)			0						

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spinocerebellar ataxia 2 (olivopontocerebellar ataxia	. 1	U70323	В			7	.+		
2, autosomal dominant, ataxin 2) (SCA2)	•								·
spinocerebellar ataxia 7	2	AJ000517		+					
(olivopontocerebellar atrophy with retinal									*
degeneration) (SCA7)									
spliceosome associated protein (SAP 145)	. 3	U41371	,	+	+	+	+	+	
splicing factor (CC1.3) (CC1.3)	2 .	L10910	+	+	+	+	+	+	
splicing factor SRp40-1 (SRp40)	. 7	U30826	+	+	+	+	+	+	
splicing factor, arginine/serine-rich 11 (SFRS11)	3	M74002	В	+	+		+	+	
splicing factor.	4	L41887	<del></del>	+	. +	+	-	+	
arginine/serine-rich 7 (35kD) (SFRS7)			9						
Src-like adapter protein (non-exact, 76%aa)		U30473			et		,		
Src-like-adapter (SLA)	6	D89077		+	+	+		+	
Src-like-adapter (SLA) (low match)	1	D89077			-				
Src-like-adapter (SLA) (low score)	1	U44403							·
stannin (SNN)	2	AF030196	+	+	+	+		+	-
STAT induced STAT inhibitor 3 (SSI-3)	1	AB004904				+			·
STE20-like kinase 3 (MST-3)	2	AF024636	+	+	+ .	+		+	
step II splicing factor SLU7 (SLU7)	1	AF101074		+		+	+	+	
steroid sulfatase	1	M17591							
steroid sulfatase (microsomal), arylsulfatase C, isozyme S (STS)	1	J04964		+	+	.+			·
sterol carrier protein 2 (SCP2)	1	. M55421		+	+	+	+	+	
sterol O-acyltransferase (acyl-Coenzyme A:	1	AF059202			٠.		+		
cholesterol acyltransferase) 1 (SOAT1)	·								•
stimulated trans-acting factor (50 kDa) (STAF50)	. 6	X82200	+	+		+	-		
Striatin, calmodulin-binding protein (STRN) (low match, 71%aa)	1	U17989							· .
Stromal antigen 2 (STAG2)	2	Z75331		$\vdash$	+	+	+	+	
stromal interaction	3	U52426	+	+	+	+		+	
molecule 1 (STIM1) structure specific	1	M86737		+	+	+		+	
recognition protein 1 (SSRP1)									
succinate dehydrogenase complex, subunit A, flavoprotein (Fp) (SDHA)	5	L21936	:		+	٠			
succinate dehydrogenase complex, subunit B, iron	1	U17248	+	+	+	+		+	
sulfur (Ip) (SDHB) succinate dehydrogenase	1	U57877	+	+	+	+		+	
complex, subunit C, integral membrane protein, 15kD (SDHC)		*							
succinate dehydrogenase complex, subunit D. Integral membrane protein	3	AB006202	• .	+	+		+		
(SDHD) succinate-CoA ligase,	1	AF0589 <b>54</b>		+	+	+	+	+	
GDP-forming, beta subunit (SUCLG2)	•	AI 000004							
		0							

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succinyl CoA synthetase	1	Z68204	T								
sudD (suppressor of bimD6, Aspergillus	2	AF013591	-	+			+	+		٠.	
nidulans) homolog (SUDD)	<u> </u>	140000		<u> </u>		<u> </u>					
sulfotransferase family 1A, phenol-preferring, member 1 (SULT1A1)		L19999		+			+	+			
sulfotransferase family 1A,	<del> </del>	U37686		<del> </del>	_	-		_	<del></del>		<del></del>
phenol-preferring, member 3 (SULT1A3) (non-exact 67%)	·	:									· .
superoxide dismutase 1, soluble (armyotrophic lateral sclerosis 1 (adult)) (SOD1)	4	X02317		+	+		+	+		` .	
superoxide dismutase 2, mitochondrial (SOD2)	5	Y00985	-3-	+.	+,	+	+	+			
supervillin (SVIL)	2	AF051851	<del>``</del>	<del>                                     </del>	+	+	$\vdash$	+	<del></del>	<u> </u>	
suppression of	2	U15131		+		+	├─	+			·
tumorigenicity 5 (ST5)	·					<u> </u>	·				
suppression of tumorigenicity 5 (ST5) (non-exact 82%)	1 .	U15779								•	
suppressor of K+ transport defect 1 (SKD1)	1	AF038960		•	+	+					٠.
suppressor of Ty (S.cerevisiae) 3 homolog	1	AF064804	. +	+	+	+	·	+			
(SUPT3H) suppressor of Ty	2	U38817	+ ·	+	+	+		+		<del></del>	· · · ·
(S.cerevisiae) 4 homolog 1 (SUPT4H1)	·				Ŀ		<u> </u>				
suppressor of Ty (S.cerevisiae) 5 homolog (SUPT5H)	2	U56402		+				+ .			
suppressor of Ty (S.cerevisiae) 6 homolog (SUPT6H)	2	U46691	+	+	+	+	+	+			
suppressor of variegation 3-9 (Drosophila) homolog 1 (SUV39H1)	1 .	AF019968		+	+	+					
survival of motor neuron 1, telomenic (SMN1)	1	U18423				-					· · .
SWI/SNF related, matrix	1	M88163	-		+	+		+			
associated, actin											
dependent regulator of		•		٠ .							
chromatin, subfamily a, member 1 (SMARCA1)			į								
(non-exact, 75%)		1									
SWI/SNF related, matrix associated, actin	2	D26155		+							
dependent regulator of		· ·									
chromatin, subfamily a.								Ċ			
member 2 (SMARCA2)	4	Nac4EE		لبا	<u> </u>	ļ.,	لبا	لبل			
SWI/SNF related, matrix associated, actin	'.	D26156	. » <del>*</del>	*	+	+	+	+		•	
dependent regulator of		*			٠.					•	•
chromatin, subfamily a, member 4 (SMARCA4)			1								
SWI/SNF related, matrix	4	U66616	+	+	+	+	+	+	•	•	<del></del>
associated, actin									-		
dependent regulator of chromatin, subfamily c,			ļ								
member 2 (SMARCC2)			·								
SWI/SNF related, matrix	2	AF035262	B, W	+	+		+	+			<u> </u>
associated, actin dependent regulator of						•					•
chromatin, subfamily e, member 1 (SMARCE1)											
synaptobrevin-like 1 (SYBL1)	1	X95803		+	+	+		+			_
synaptosomal-associated protein, 23kD (SNAP23)	2	AJ011915		+	+	+		+			
syndecan binding protein	15	AF006636	. +	+	+	+		+			
(syntenin) (SDCBP)		٠.							4		

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synovial sarcoma, translocated to X chromosome (SSXT)	2	X79201	3	+					
syntaxin 16	1	AF038897		-		-	-		
syntaxin 3A (STX3A)	2	U32315		+		+		+	
	<del></del>	AJ002078.1							
syntaxin 6 (STX6)	·	000186							
SYNTAXIN BINDING PROTEIN 3 (UNC-18 HOMOLOG 3) (UNC-18C)	1								
syntaxin-16C	• 1	AF008937							
SYT interacting protein (SIP)	1	AF080561		+	+	+		+	*
T cell activation, increased late expression (TACTILE)	4	M88282				+	•		
T cell receptor V alpha gene segment V-alpha-7 (clone IGRa11)	.2	X58744			:				
T cell receptor V alpha gene segment V-alpha-w27	1	X58740							
T3 receptor-associating cofactor-1	5	S83390	+	+	+	+	+,	+	
tafazzin (cardiomyopathy, dilated 3A (X-linked);	1	X92763	+	+		+		+	*
endocardial fibroelastosis 2; Barth syndrome) (TAZ)		1100404	·						
TAFII100 protein (non- exact 53%)		U80191		+					
tankyrase, TRF1- interacting ankyrin-related ADP-ribose polymerase (TNKS)	1 .	AF082556	. *	+	+	*			
TAP1, TAP2, LMP2, LMP7 and DOB	1	X66401							
TAR DNA-binding protein- 43	6	U23731	+	+	+	+		+	
Tat interactive protein (60kD) (TIP60)	2	U40989	+.	+	+	+		+	
TATA box binding protein (TBP)-associated factor, RNA polymerase II, C1, 130kD (TAF2C1) (non- exact, 55%)	• .	O00268						•	
TATA box binding protein (TBP)-associated factor, RNA polymerase II, F, 55kD (TAF2F)	4	X97999		+	+	+	+	+	
TATA box binding protein (TBP)-associated factor, RNA polymerase II, G, 32kD (TAF2G)	2	U21858			+	+	+	+	
TATA box binding protein (TBP)-associated factor, RNA polymerase II, I, 28kD (TAF2I)	1 .	D63705	•	+	+	+		+	
Tax1 (human T-cell leukemia virus type I) binding protein 1 (TAX1BP1)	1.	U33821		+	+	+	+	+	
T-box 2 (TBX2) (non-exact 77%)	1	U28049			+	+		+	
TBP-associated factor 172 (TAF-172)	1	AJ001017	1	+		+		+	
T-cell death-associated gene 8 (TDAG8)	. 1	U95218				+			
T-cell leukemia/lymphoma 1A (TCL1A)	1	X82240	+						
T-cell leukemia/lymphoma 1A (TCL1A) (low match)	. 1	X82240			Ŀ				
T-cell receptor (delta D2- J1-region) (clone K3B)	1	M22197							

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T-cell receptor (V beta 5.1, J beta 1.5, C beta 1) (low match)	1	M97705	X.						0.
T-cell receptor alpha delta (=M94081)	2	AE000662	·					<u> </u>	
T-cell receptor alpha enhancer-binding protein, short form (=X58636	1	B39625			٠.				
Mouse LEF1 lymphoid enhancer binding factor 1 (=D16503))						·	1		
T-cell receptor delta gene D2-J1-region, clone K3B	1	M22197					•		*
T-cell receptor germline beta chain gene V-region (V) V-beta-MT1-1	1	M11955			÷				×
T-cell receptor germline beta-chain gene J2.1 exon	1.	M14159	4		-				only in blood
T-cell receptor germline delta-chain D-J region	2	M22152					·		
T-cell receptor interacting molecule (TRIM) protein	2	AJ224878						+	
T-cell receptor rearranged delta-chain, V-region (V-delta 3-J)	1	M21784							
T-cell receptor, alpha (V,D,J,C) (TCRA)	3	AE000660	+	+	.+	+		+	
T-cell receptor, beta cluster (TCRB)	3	L34740	+	+	+	+	+	+	high in pancreas
T-cell receptor, delta (V,D,J,C) (TCRD)	2	X73617			+	+		+	
T-cell, immune regulator 1 (TCIRG1)	3	U45285							only found in tumor
TCF-1 mRNA for T cell factor 1	: 1	X59870	14						
TCF-1 mRNA for T cell factor 1 (splice form B) (low match)	1	X59870							
T-COMPLEX PROTEIN 1, ETA SUBUNIT (TCP-1- ETA) (CCT-ETA) (HIV-1 NEF INTERACTING	1 .	Q99832							
PROTEIN) T-COMPLEX PROTEIN 1, THETA SUBUNIT (TCP-1- THETA) (CCT-THETA)	1	P50990					·		
(KIAA0002) TCR eta = T cell	1	S94421		-		├			•
receptor(eta-exon) TCR V Beta 13.2	7	X75419		<u> </u>		┢			
TERA	1	AC004472							·
testis enhanced gene transcript (TEGT)	33	X75861	*	+	+	+	+	+	
tetracycline transporter-like protein (TETRAN)	2	L11669		+	+.	+		+	
tetratricopeptide repeat domain 1 (TTC1)	1	U46570	+	+	+	+		+	*
tetratricopeptide repeat domain 2 (TTC2)	1.	U46571		+		+		+	
tetratricopeptide repeat domain 3 (TTC3)	1	D84296	+	+	+	+	Ť	+	
TGFB1-induced anti- apoptotic factor 1 (TIAF1)	1	D86970	+	+	+	+		+	
thioredoxin reductase 1 (TXNRD1)	. 3	S79851		+	+	+		+	
THIOREDOXIN- DEPENDENT PEROXIDE REDUCTASE	1	P30048	i i						
PRECURSOR, mitochondrial (ANTI- OXIDANT PROTEIN 1) (AOP-1)									

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threonyl-tRNA synthetase (TARS)	. 1	M63180	-	+.	+.	+		+	
thrombin inhibitor	1	Z22658							
thrombospondin 1 (THBS1)	2.	X04665		+	. +	+	+	+	
thromboxane A synthase 1 (platelet, cytochrome P450, subfamily V) (TBXAZ1)	<b>1</b>	M80647		+		+	+	+	
thymidine kinase 2, mitochondrial (TK2)	2	× X76104		+	+		+		
thymidylate kinase (CDC8)	1 1	L16991		+	+	+.	·	+	
thymine-DNA glycosylase (TDG)	2	U51166	+	+	+	+		+	
Thymosin, beta 10 (TMSB10)	2	M20259	+	+.	+.	+	+	+	
thymosin, beta 4, X chromosome (TMSB4X)	29	M17733		+	+	+		+	
thyroid autoantigen 70kD (Ku antigen) (G22P1)	. 7	J04611	٠.,						
thyroid hormone receptor coactivating protein	- 1	AF016270		+		+	,	. +	
(SMAP) thyroid hormone receptor	2	L40357	• •	+	+	+		+	
interactor 7 (TRIP7)	,				<u> </u>				
thyroid hormone receptor interactor 8r (TRIP8)	4	L40411		+	٠	<u> </u>		<u> </u>	
thyroid hormone receptor- associated protein, 230 kDa subunit (TRAP230)	1	D83783							
thyroid receptor interacting	2 .	L40388	+	+	+	+			
protein 15 (TRIP15)	1	D50525	· · · · · · · · · · · · · · · · · · ·			-			<del></del>
TIA1 cytotoxic granule-	1	M77142		+	+	+		+	<u> </u>
associated RNA-binding protein (TIA1)							·		
tissue inhibitor of	1	X02598	+	+	+	+	+	+	
metalloproteinase 1 (erythroid potentiating activity, collagenase				:					
inhibitor) (TIMP1) tissue inhibitor of metalloproteinase 2	1	M32304	+	+	+	+	-	+	high in placenta
(TIMP2)		U58766		+	+	+		+	
tissue specific transplantation antigen P35B (TSTA3)			+		Ţ			Ť	
titin (TTN)	1	X64697	+	+	+	+		+	high in muscle
TNF receptor-associated factor 2 (TRAF2)	1	U12597		+	+	+	. ·	+	·
TNF receptor-associated factor 3 (TRAF3)	1	AF110908.1	-34	+					
TNF receptor-associated factor 6 (TRAF6) (low match)	1	U78798							
toll-like receptor 1 (TLR1)	1	U88540				+	Γ		
toll-like receptor 2 (TLR2)	1	U88878	+	+		+	T	+	
toll-like receptor 4 (TLR4)	1	U88880		+	0.		+		
toll-like receptor 5 (TILR5)	1	AF051151		+		+			
topoisomerase (DNA) I (TOP1)	1	.J03250		+	•	+			
topoisomerase (DNA) II	2	X68060	+	+	+	+		+	. :
beta (180kD) (TOP2B)	l ·								
beta (180kD) (TOP2B) topoisomerase (DNA) III beta (TOP3B)	3	D87012	+				<u> </u>		· .
beta (180kD) (TOP2B) topoisomerase (DNA) III beta (TOP3B) TR3beta	3	D85245		+			ŀ		
beta (180kD) (TOP2B) topoisomerase (DNA) III beta (TOP3B)	3		+	+	+	+	+	+	
beta (180kD) (TOP2B) topoisomerase (DNA) III beta (TOP3B) TR3beta TRAF family member- associated NF-kB activator	3	D85245			+	+	+	+	
beta (180kD) (TOP2B) topoisomerase (DNA) III beta (TOP3B) TR3beta TRAF family member- associated NF-kB activator (TANK)	3 1 3	D85245 U63830			+	+	+	+	

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transaldolase-related	1	AF010398						·	
transcobalamin II (TCII)	1	AF047576							
transcription elongation factor B (SIII), polypeptide 1-like (TCEB1L)	2	Z47087	+	+	+	+,		+	4
transcription elongation factor B (SIII), polypeptide 3 (110kD, elongin A) (TCEB3)	1	L47345	•	+	+	. +	+	+	
transcription factor 12 (HTF4, helix-loop-helix transcription factors 4) (TCF12)		M83233	+	8	+	+		+	
transcription factor 17	2	. D89928		+		+			
transcription factor 4	2	X52079		+	+	+		+	
transcription factor 6-like 1 (mitochondrial transcription factor 1-like) (TCF6L1)	2	M62810	+	+	+	+			
transcription factor 7-like 2 (T-cell specific, HMG-box) (TCF7L2)	1	Y11306		+	·+	+	-	+	
transcription factor binding to IGHM enhancer 3 (TFE3)	1	X96717	+	+	+	+		+	
transcription factor IL-4 Stat	7.	AF067575	+	+	+	+	+	+	
transcription factor IL-4 Stat (low match)		U16031							·
transcription factor ISGF-3 (=M97936)	4 .	M97935	-				<u> </u>		
transcription factor REST	1	A56138		<u> </u>	<u> </u>			<u> </u>	
transcription factor TFIID	1	Z22828						<u> </u>	
transcriptional adaptor 2 (ADA2, yeast, homolog)- like (TADA2L)	1	AF064094							
transcriptional intermediary factor 1 (TIF1) (non-exact 72%)	1	AF009353							
transducin (beta)-like 1 (TBL1)	1	Y12781	+ .	+	+	+		+	
transducin-like enhancer of split 3, homolog of Drosophila E(sp1) (TLE3)	1	M99438	. +	+					
Transformation/transcription domain-associated protein (TRRAP)	1	AF076974	+	+	+	+		+	
transformation-sensitive, similar to Saccharomyces cerevisiae STI1 (STI1L)	. 2	M86752		+	+	+		+	
transforming growth factor beta-activated kinase 1 (TAK1) (non-exact 78%)	1	AB009356							
transforming growth factor beta-stimulated protein TSC-22 (TSC22)	3	AJ222700	+	+	+	+		+	
transforming growth factor, beta receptor III (betaglycan, 300kD)	1	L07594		+	+	+		+	
(TGFBR3) transforming growth factor, beta-induced, 68kD (TGFBI)	2	4507466	+		+	+	+	+	
TRANSFORMING GROWTH FACTOR-BETA INDUCED PROTEIN IG-H3 PRECURSOR (BETA IG-H3)	2	Q15582							
transforming, acidic coiled- coil containing protein 1 (TACC1) (non-exact 70%)	1	AF049910							·

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transgelin 2 (TAGLN2)	14	D21261	+	+.	+	+	+	+	
transgelin 2 (TAGLN2) (non-exact)	1	D21261							
trans-Golgi network protein (46, 48, 51kD isoforms) (TGN51)	.2	AF029316		+		+			
transient receptor potential channel 1 (TRPC1)	, 1	X89066		+	+	+		+	
transketolase (Wernicke- Korsakoff syndrome) (TKT)	. 7	L12711		+	+.	+		+	
translation factor sui1 homolog (GC20)	1	AF064607		+	+	+	+	+	
translin (TSN)	3	X78627	+	+	+	+		+	
translin-associated factor X (TSNAX)	1	X95073		+	+	+		+	
transmembrane glycoprotein (A33)	1	U79725							
transmembrane protein (63kD), endoplasmic	1	X69910	+ .	+	+	+		+	
reticulum/Golgi intermediate compartment (P63)		,					*		
transmembrane protein 1 (TMEM2)	1	AB001523		+		+		+	
TRANSMEMBRANE PROTEIN SEX PRECURSOR (non-exact 65%)	1	P51805							
transmembrane trafficking protein (TMP21)	2	X97442	+	+	+	+	+	+	
transporter 1, ABC (ATP binding cassette) (TAP1)	3	L21208	+	+	+	+		+	
Treacher Collins- Franceschetti syndrome 1 (TCOF1)	2	U40847	+	+	+	+		+	high in many libraries
triosephosphate isomerase	2 .	X69723	+	+	+	+	+	+.	
tropomyosin	2	. X04201		+	+	+		+	•
tropomyosin 4 (TPM4)	2	X05276	+ .	+	+	+		+	
TRPM-2 protein	2 .	M63376	•				·		
tryptase I precursor (non- exact 64%)(=P20231)	1	A35863							
tryptophan rich basic protein (WRB)	1	Y12478				<u> </u>		·	
tryptophanyl-tRNA synthetase (WARS)	1	X59892	+	+	+	+	+	+	4
Ts translation elongation factor, mitochondrial (TSFM)	1	L37936	+	+		+			
ttopoisomerase (DNA) II beta (180kD)	1 .	. Z15115		+	+			+	
Tu translation elongation factor, mitochondrial (TUFM)	4	L38995							
tuberous sclerosis 1 (TSC1)	1	AF013168		+	+	+		+	
fuberous sclerosis 2 (TSC2)	1	X75621		+	+	+		+	
tubulin, alpha 1 (testis specific) (TUBA1)	1	X06956		+		·	+		
tubulin, alpha, ubiquitous (K-ALPHA-1)	11	K00558	+	+	_	+.	Ť	+	high in many libraries
(K-ALPHA-1) (low match)	1	K00558							
tubulin-specific chaperone c (TBCC)	1	U61234			+	+		+	
tumor necrosis factor (ligand) superfamily, member 10 (TNFSF10)	7	U37518		+		+		+	

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Umor necrosis factor (ilgand) superfamily, member 14 (TNFSF14) (ilgand) superfamily, member 14 (TNFSF14) (ilgand) superfamily, member 14 (TNFSF18) (ilgand) superfamily, member 15 (TNFSF8) (ilgand) superfamily, member 8 (TNFSF8) (ilgand) superfamily, member 8 (TNFSF8) (ilgand) superfamily, member 8 (TNFSF8) (ilgand) superfamily, member 15 (TNFSF8) (ilgand) superfamily, member 15 (TNFSF8) (ilgand) superfamily, member 15 (TNFSF8) (ilgand) superfamily, member 15 (TNFSF7) (ilgand) superfamily, member 10 (TNFSF7) (ilgand) superfamily, member 10 (TNFSF7) (ilgand) superfamily, member 10 (TNFSF7) (ilgand) superfamily, member 10 (TNFSF7) (ilgand) superfamily, member 10 (TNFSF7) (ilgand) superfamily, member 10 (TNFSF7) (ilgand) superfamily, member 10 (TNFSF7) (ilgand) superfamily, member 10 (TNFSF7) (ilgand) superfamily, member 10 (TNFSF7) (ilgand) superfamily, member 10 (TNFSF7) (ilgand) superfamily, member 12 (translocation) discontinuous superfamily, member 12 (translocation) (ilgand) superfamily, member 12 (translocation) (ilgand) superfamily, member 12 (translocation) (ilgand) superfamily, member 12 (translocation) (ilgand) superfamily, member 12 (translocation) (ilgand) superfamily, member 15 (TNFSF718) (ilgand) superfamily, member 16 (TNFSF718) (ilgand) superfamily, member 16 (TNFSF718) (ilgand) superfamily, member 16 (TNFSF718) (ilgand) superfamily, member 16 (TNFSF718) (ilgand) superfamily, member 16 (TNFSF718) (ilgand) superfamily, member 16 (TNFSF718) (ilgand) superfamily, member 16 (TNFSF718) (ilgand) superfamily, member 17 (TNFSF718) (ilgand) superfamily, member 16 (TNFSF718) (ilgand) superfamily, member 17 (TNFSF718) (ilgand) superfamily, member 17 (TNFSF718) (ilgand) superfamily, member 18 (TNFSF718) (ilgand) superfamily, member 19 (TNFSF718) (ilgand) superfamily, member 19 (TNFSF718) (ilgand) superfamily, superfamily, superfamily, superfamily, superfamily, superfamily, superfamily, superfamily, superfamily, superfamily, superfamily, superfamily, superfamily, superfamily, superfamily, superfamily, superfami	tumor necrosis factor (ligand) superfamily, member 13 (TNESE13)	1	AF046888	., <b>+</b>	+		+		+	× .
Unifor necrosis factor   1	tumor necrosis factor (ligand) superfamily.	1	AF036581		-					
umor necrosis factor plane in the process of the pr	lumor necrosis factor (ligand) superfamily,	1	D38122	+		·				Found only in library 386: T-cell lymphoma
umor necrosis factor physicians (Pizz) paper demains (Pizz) paper demains (Pizz) paper demains (Pizz) paper demains (Pizz) paper demains (Pizz) paper demains (Pizz) paper demains (Pizz) paper demains (Pizz) paper demains (Pizz) paper demains (Pizz) paper demains (Pizz) paper	tumor necrosis factor (ligand) superfamily,	1	L09753	B only		-				
Tumor necrosis factor eceptor superfamily member 7 (TNFRSF7) tumor necrosis factor receptor superfamily member 10 (TNFRSF10B) tumor necrosis factor receptor superfamily member 100, fNFRSF10B) tumor necrosis factor receptor superfamily, member 100, decoy without an intracellular domain (TNFRSF10C) tumor necrosis factor receptor superfamily, member 100, decoy with truncated death domain (TNFRSF10D) (non-exact 84%) tumor necrosis factor receptor superfamily, member 100, fursional factor receptor superfamily, member 100, fursional factor f	tumor necrosis factor alpha-inducible cellular protein containing leucine	1	AF061034		+		+		+	
umor necrosis factor receptor superfamily, member 10b (TNFRSF10B)	Tumor necrosis factor receptor superfamily	2	M63928	· · · · · · · · · · · · · · · · · · ·	+	-		+		
tumor necrosis factor receptor superfamily, member 10c, decoy without an intracellular domain (TNFRSF10C) through the protein of the protein	tumor necrosis factor	<del></del>	AF016266		+	+	+	+	+	
an intracellular domain (TNRSF10C) umor necrosis factor receptor superfamily, member 10d, decoy with truncated death domain (TNRSF10D) (non-exact 84%) umor necrosis factor receptor superfamily, member 12d, translocating chain-association membrane protein) (TNRSF12) umor necrosis factor receptor superfamily, member 12d, therepsvirus entry mediator) (TNRSF12) umor necrosis factor receptor superfamily, member 18d, therepsvirus entry mediator) (TNRSF14) tumor necrosis factor receptor superfamily, member 18d, thereby superfamily, member 18d, thereby superfamily, member 18d, thereby superfamily, member 18d, thereby superfamily, member 18d, thereby superfamily, member 6d, thereby superfamily, member 6d, thereby superfamily, member 6d, thereby superfamily, member 6d, thereby superfamily, member 6d, thereby superfamily, member 7d, thereby superfamily, member 7d, thereby superfamily, member 7d, thereby superfamily, member 7d, thereby superfamily, member 7d, thereby superfamily, member 7d, thereby superfamily, member 7d, thereby superfamily, member 7d, thereby superfamily, member 7d, thereby superfamily, member 6d, thereby superfamily, member 7d, thereby superfamily, member 6d, thereby superfamily, member 7d, thereby superfamily, member 6d, thereby superfamily, member 6d, thereby superfamily, member 6d, thereby superfamily, member 7d, thereby superfamily, thereby	member 10b (TNFRSF10B) tumor necrosis factor receptor superfamily.	3	AF012629			<u> </u>		+		
receptor superfamily, member 10d, decoy with funcated death domain (TNRSF10D) (non-exact 84%) tumor necrosis factor receptor superfamily, member 12 (translocating chain-association membrane protein) (TNRSF12) tumor necrosis factor receptor superfamily, member 14 (herpesvirus entry mediator) (TNRSF14) tumor necrosis factor receptor superfamily, member 14 (herpesvirus entry mediator) (TNRSF14) tumor necrosis factor receptor superfamily, member 16 (TNRSF1B) tumor necrosis factor receptor superfamily, member 16 (TNRSF6) tumor necrosis factor receptor superfamily, member 6 (TNRSF6) tumor necrosis factor receptor superfamily, member 7 (TNRSF7) tumor necrosis factor receptor superfamily, member 7 (TNRSF7) tumor necrosis factor alpha-induced protein 2 (TNRAIP2) tumor necrosis factor, alpha-induced protein 3 (TNRAIP3) tumor protein 53-binding protein, 1 (TPS3BP1) tumor protein 53-binding protein, 1 (TPS3BP1) tumor protein p53 (LIP Fraumeni syndrome) (TPS3BPL) tumor protein p53-binding protein, 1 (TPS3BPL) tumor pr	member 10c, decoy without an intracellular domain (TNFRSF10C)							ŀ		
domain (TNFRSF10D) (non-exact 84%)  tumor necrosis factor receptor superfamily, member 12 (translocating chain-association membrane protein) (TNFRSF12) tumor necrosis factor receptor superfamily, member 14 (herpesvirus entry mediator) (TNFRSF14) tumor necrosis factor receptor superfamily, member 18 (TNFRSF18) tumor necrosis factor receptor superfamily, member 18 (TNFRSF18) tumor necrosis factor receptor superfamily, member 6 (TNFRSF6) tumor necrosis factor receptor superfamily, member 6 (TNFRSF6) tumor necrosis factor receptor superfamily, member 7 (TNFRSF7) tumor necrosis factor alpha-induced protein 2 (TNFAIP2) tumor necrosis factor, alpha-induced protein 2 (TNFAIP2) tumor necrosis factor, alpha-induced protein 3 (TNFAIP3) tumor protein S3-binding protein, 1 (TPS3BPL) tumor protein p53-binding protein, 1 (TPS3BPL) tumor protein p53-binding protein (TPS3BPL) tumor protein p53-binding protein (TPS3BPL) tumor protein p53-binding protein (TPS3BPL) tumor protein p53-binding protein (TPS3BPL) tumor protein p53-binding protein (TPS3BPL) tumor protein p53-binding tumor protein p53-binding tumor protein p53-binding tumor protein p53-binding tumor protein p53-binding tumor protein p53-binding tumor protein p53-binding tumor protein p53-binding tumor protein p53-binding tumor protein p53-binding tumor protein p53-binding tumor protein p53-binding tumor protein p53-binding tumor protein p53-binding tumor protein p53-binding tumor protein p53-binding tumor protein p53-binding tumor protein p53-binding tumor protein p54-binding tumor protein p54-binding tumor protein p54-binding tumor protein p54-binding tumor protein p54-binding tumor p54-binding tumo	receptor superfamily, member 10d, decoy with	1.	AF023849	·			7			found only in prostate
receptor superfamily, member 12 (translocating chain-association membrane protein) (TNFRSF12) tumor necrosis factor receptor superfamily, member 14 (herpesvirus entry mediator) (TNFRSF14) tumor necrosis factor receptor superfamily, member 18 (TNFRSF18) tumor necrosis factor receptor superfamily, member 18 (TNFRSF18) tumor necrosis factor receptor superfamily, member 6 (TNFRSF6) tumor necrosis factor receptor superfamily, member 6 (TNFRSF7) tumor necrosis factor alpha-induced protein 2 (TNFRSF7) tumor necrosis factor, alpha-induced protein 2 (TNFRSF3) tumor necrosis factor, alpha-induced protein 3 (TNFAIP3) tumor protein 53-binding protein, 1 (TPSBP1) tumor protein p53-binding protein, 1 (TPSBP1) tumor protein p53-binding protein, 1 (TPSBP1) tumor protein p53-binding protein, 1 (TPSBPL) tumor protein p53-binding protein, 1 (TPSBPL) tumor protein p53-binding protein, 1 (TPSBPL) tumor protein p53-binding tumor protein p53-binding tumor protein p53-binding tumor protein p53-binding tumor protein p53-binding tumor protein p53-binding tumor protein p53-binding tumor protein p53-binding tumor protein p53-binding tumor protein, 1 (TPSBPL) tumor protein, 1 (TPSBPL) tumor protein, 1 (TPSBPL) tumor protein, 1 (TPSBPL) tumor protein, 1 (TPSBPL) tumor protein, 1 (TPSBPL) tumor protein, 1 (TPSBPL) tumor protein, 1 (TPSBPL) tumor protein, 1 (TPSBPL) tumor protein, 1 (TPSBPL) tumor protein p53-binding tumor protein, 1 (TPSBPL) tumor protein, 1 (TPSBPL) tumor protein, 1 (TPSBPL) tumor protein p53-binding tumor protein, 1 (TPSBPL) tumor protein p53-binding tumor protein, 1 (TPSBPL) tumor protein p53-binding tumor protein, 1 (TPSBPL) tumor protein p53-binding tumor protein, 1 (TPSBPL) tumor protein p53-binding tumor protein, 1 (TPSBPL) tumor psicion p53-binding tumor protein p53-binding tumor p53-binding tumor p54-binding tumor p54-binding tumor p54-binding tumor p54-binding tumor p54-binding tumor p54-binding tumor p54-binding tumor p54-binding tumor p54-binding tumor p54-binding tumor p54-binding tumor p54-binding tumor p54-bin	domain (TNFRSF10D) (non-exact 84%)		. HOJEAN							
membrane protein) (TNFRSF12) (TNFRSF14) member 14 (herpesvirus entry mediator) (TNFRSF14) tumor necrosis factor receptor superfamily, member 18 (TNFRSF1B) tumor necrosis factor receptor superfamily, member 18 (TNFRSF1B) tumor necrosis factor receptor superfamily, member 6 (TNFRSF6) tumor necrosis factor 1 M63928 + + receptor superfamily, member 6 (TNFRSF7) tumor necrosis factor 2 M63928 + + receptor superfamily, member 7 (TNFRSF7) tumor necrosis factor, alpha-induced protein 2 (TNFAIP2) tumor necrosis factor, alpha-induced protein 3 (TNFAIP3) tumor protein 53-binding 1 AF078776 + + + + + + + + + + + + + + + + + +	receptor superfamily, member 12 (translocating	. 1	U94508	+	+	†			+	
receptor superfamily, member 14 (herpesvirus entry mediator) (TNFRSF14) tumor necrosis factor receptor superfamily, member 18 (TNFRSF18) tumor necrosis factor receptor superfamily, member 6 (TNFRSF6) tumor necrosis factor receptor superfamily, member 6 (TNFRSF6) tumor necrosis factor receptor superfamily, member 7 (TNFRSF7) tumor necrosis factor, alpha-induced protein 2 (TNFAIP2) tumor necrosis factor, alpha-induced protein 3 (TNFAIP3) tumor protein 53-binding protein, 1 (TP53BP1) tumor protein p53-binding protein, 1 (TP53BPL) tumor protein, 1 (TP53BPL) tumor protein, 1 (TP53BPL) tumor protein, 1 (TP53BPL) tumor protein, 1 (TP53BPL) tumor protein, 1 (TP53BPL) tumor protein, 1 (TP53BPL) tumor protein, 1 (TP53BPL) tumor protein, 1 (TP53BPL) tumor protein, 1 (TP71) (Iow score) tumor protein, 1 (TP11) (Iow score) tumor protein, 1 (TP11) (Iow score) tumor protein and protein 1 (TP518PC) (	membrane protein) (TNFRSF12)	-	1170321	•	+	+	+		+	
tumor necrosis factor receptor superfamily, member 18 (TNFRSF18): tumor necrosis factor receptor superfamily, member 6 (TNFRSF6) tumor necrosis factor receptor superfamily, member 6 (TNFRSF6) tumor necrosis factor receptor superfamily, member 7 (TNFRSF7) tumor necrosis factor, alpha-induced protein 2 (TNFAIP2) tumor necrosis factor, alpha-induced protein 3 (TNFAIP3) tumor protein 53-binding protein, 1 (TP53BP1) tumor protein p53-binding protein, 1 (TP53BP1) tumor protein p53-binding protein (TP53BPL) tumor protein p53-binding protein (TP53BPL) tumor protein, 1 (TP53BPL) tumor prote	receptor superfamily, member 14 (herpesvirus entry mediator)	•	370021		·					
receptor superfamily, member 6 (TNFRSF6) tumor necrosis factor receptor superfamily, member 7 (TNFRSF7) tumor necrosis factor, alpha-induced protein 2 (TNFAIP2) tumor necrosis factor, alpha-induced protein 3 (TNFAIP3) tumor protein 53-binding protein, 1 (TP53BP1) tumor protein p53 (Lip Fraumeni syndrome) (TP53) Tumor protein p53-binding protein (TP53BPL) tumor protein, 1 (TP53BPL) tumor protein,	tumor necrosis factor receptor superfamily, member 1B (TNFRSF1B)	5	Y		+	+	+		+	3
receptor superfamily, member 7 (TNFRSF7) tumor necrosis factor, alpha-induced protein 2 (TNFAIP2) (tumor necrosis factor, alpha-induced protein 3 (TNFAIP3) tumor protein 53-binding protein, 1 (TP53BP1) tumor protein p53 (Li-	tumor necrosis factor receptor superfamily, member 6 (TNFRSF6)	1		B, W					+.	
alpha-induced protein 2 (TNFAIP2) tumor necrosis factor, alpha-induced protein 3 (TNFAIP3) tumor protein 53-binding protein, 1 (TP53BP1) tumor protein p53 (Li-fraumeni syndrome) (TP53) Tumor protein p53-binding protein (TP53BPL) tumor protein, (T	tumor necrosis factor receptor superfamily, member 7 (TNFRSF7)	1		+					·	
alpha-induced protein 3 (TNFAIP3) tumor protein 53-binding protein, 1 (TP53BP1) tumor protein p53 (Li- Fraumeni syndrome) (TP53) Tumor protein p53-binding protein (TP53BPL) tumor protein, translationally-controlled 1 (TPT1) tumor protein, translationally-controlled 1 (TPT1) (low score) tumor rejection antigen  AF078776	alpha-induced protein 2 (TNFAIP2)				+	+		_		
protein, 1 (TP53BP1) lumor protein p53 (Li- Fraumeni syndrome) (TP53)  1	alpha-induced protein 3 (TNFAIP3)									
Fraumeni syndrome) (TP53) Tumor protein p53-binding protein (TP53BPL) tumor protein,	protein, 1 (TP53BP1)						*	<u></u>		, .
protein (TP53BPL) tumor protein, translationally-controlled 1 (TPT1) tumor protein, translationally-controlled 1 (TPT1) (low score) tumor rejection antigen 9 X15187 + + + + + +	Fraumeni syndrome) (TP53)				+.					
translationally-controlled 1 (TPT1) tumor protein, translationally-controlled 1 (TPT1) (low score) tumor rejection antigen 9 X15187 + + + + + +	protein (TP53BPL)		,	+			+		+	
translationally-controlled 1 (TPT1) (low score) tumor rejection antigen 9 X15187 + + + + + +	translationally-controlled 1 (TPT1)									
tamor rejection anagem is a series in the se	translationally-controlled 1 (TPT1) (low score)									
100	(gp96) 1 (TRA1)	9	<u> </u>		<u> </u>			*		<u> </u>

PCT/CA00/00005

WO 00/40/42			•					•	
tumorous imaginal discs (Drosophila) homolog (TID1)	2	AF061749		+		·			
TXK tyrosine kinase (TXK)	2	L27071	·						
type II integral membrane protein (NKG2-E)	1	AJ001685.					+		found only in fetal liver/spleen
TYRO protein tyrosine kinase binding protein (TYROBP)	3	AF019562			+				
tyrosine 3- monooxygenase/tryptopha	. 1	X57346	+	+	+	+		+_	high in ecnorm
n 5-monooxygenase activation protein, beta			· ·			٠.			
polypeptide (YWHAB) tyrosine 3-	1	M86400						-	
monooxygenase/tryptopha on 5-monooxygenase activation protein, zeta	*								
polypeptide ( YWHAZ)								_	
tyrosine 3- monooxygenase/tryptopha	1	M86400					,		
n 5-monooxygenase activation protein, zeta									
polypeptide (YWHAZ) Tyrosine kinase 2 (TYK2)	3	X54637	<u> </u>	+	+	+		+	<del></del>
TYROSINE-PROTEIN KINASE ZAP-70 (70 KD	2	P43403						į.	
ZETA-ASSOCIATED PROTEIN) (SYK-RELATED TYROSINE KINASE)									
tyrosyl-tRNA synthetase (YARS)	1	U89436	+	+	+-	+		+	
U1 small nuclear RNA	1	M14387							
U19H snoRNA (=M63485	1	AJ224166							4.
R.norvegicus matrin 3) U2(RNU2) small nuclear	1	M96982	<u> </u>	+	+	+	<del>-</del>	+	
RNA auxillary factor 1 (non-standard symbol) (U2AF1)	•••		0						
U22 snoRNA host gene (UHG)	2	U40580		$\vdash$					
U4/U6-associated RNA splicing factor (HPRP3P)	4	AF016370		+	+	+		+	
U49 small nuclear RNA	1	X96649	1	-		<del>                                     </del>	$\vdash$	-	
U5 snRNP-specific protein (220 kD), ortholog of S. cerevisiae Prp8p (PRP8)	1 .	AB007510	+	+.	+	+		+	
U5 snRNP-specific protein, 116 kD (U5-116KD)	4	D21163	, +	+	+	+		+	
U5 snRNP-specific protein, 200 kDa (DEXH RNA helicase family) (U5-200-	3	270200							
WD) Uba80 mRNA for ubiquitin	4	S79522	+	+	+	+	+	+	high in overy
ubiquinol-cytochrome c reductase (6.4kD) subunit	1	D55636	+	+	+	+	+	+	high in fetal lung
(UQCR) UBIQUINOL-	1	P47985	-	1	<u> </u>	-	-	-	
CYTOCHROME C REDUCTASE IRON- SULFUR SUBUNIT									
PRECURSOR (RIESKE IRON-SULFUR PROTEIN) (RISP) (low match)							:		
ubiquitin A-52 residue ribosomal protein fusion product 1 (UBA52)	2	X56999	•						
ubiquitin activating enzyme E1-like protein (GSA7)		AF094516		+	+			+	
ubiquitin C (UBC)	. 5	AB009010		+	+	+	+	+	high in ovary

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ubiquitin carboxyl-terminal esterase L3 (ubiquitin thiolesterase) (UCHL3)	1	M30496	+	+	+	+		+	
ubiquitin fusion degradation 1-like (UFD1L)	1	U64444	+	+	+	+.		+	
ubiquitin protein ligase E3A (human papilloma virus E6-	1	U84404	В .	+	+			+	·
associated protein, Angelman syndrome) (UBE3A)		,							
ubiquitin specific protease 10 (USP10)	4	D80012	. +	+	+	+		+	
ubiquitin specific protease 11 (USP11)	1	U44839	+	.+	+	+	+	+	·
ubiquitin specific protease 15 (USP15)	3	AB011101	+	+.	, 4	+		+	
ubiquitin specific protease 19 (USP19)	1	AB020698		+			+	· +	
ubiquitin specific protease 4 (proto-oncogene) (USP4) ubiquitin specific protease	1	AF017305 AF017306	В				_	Ť	
4 (proto-oncogene) (USP4) (non-exact, 66%)	1		(i)						
ubiquitin specific protease 7 (herpes virus-associated) (USP7)	1	Z72499		+	+	+		+	
ubiquitin specific protease 8 (USP8)	5	D29956		+	+	+		+	
UBIQUITIN-ACTIVATING ENZYME E1 (A1S9 PROTEIN) (56%)	. 1	P22314							
ubiquitin-activating enzyme E1 (A1S9T and BN75 temperature sensitivity complementing) (UBE1)	1	M58028	*	+	+	+		+	
ubiquitin-activating enzyme E1. like (UBE1L)	.1	L34170	+	+		+		+	
UBIQUITIN-BINDING PROTEIN P62; phosphotyrosine independent ligand for the		U41806			+		*		
Lck SH2 domain p62 (P62) ubiquitin-conjugating enzyme E2 variant 1 (UBE2V1)	2	U49278	*	+	+	+	+	+	
ubiquitin-conjugating enzyme E2 variant 2	1	X98091					_		
(UBE2V2) UBIQUITIN- CONJUGATING ENZYME	1	Q16781			-		-		
E2-17 KD (UBIQUITIN- PROTEIN LIGASE)					Ŀ				
ubiquitin-conjugating enzyme E2B (RAD6 homolog) (UBE2B)	1	M74525	*	*	. *	*		+	,
ubiquitin-conjugating enzyme E2G 2 (homologous to yeast UBC7) (UBE2G2)	1	AF032456	+	+	+	+		+	
ubiquitin-conjugating enzyme E2H (homologous to yeast UBC8) (UBE2H)	1	Z29328	+	+	+	+		+	
ubiquitin-conjugating enzyme E2L 1 (UBE2L1)	1	X92962		+	+			+	
ubiquitin-conjugating enzyme E2L 3 (UBE2L3)	3	AJ000519		+	+	+		+	
ubiquitin-conjugating enzyme E2L 6 (UBE2L6)	4 .	AF031141		+	+	+	+	+	
ubiquitin-like 1 (sentrin) (UBL1)	2	U61397	*	+	+			+	

WO 00/40/49									21/CA00/00003
UDP-N-acetyl-alpha-D- galactosamine:polypeptide	2	X85019	*						
N- acetylgalactosaminyitransf erase 2 (GalNAc-T2)	*								
(GALNT2) UDP-N-acetyl-alpha-D-	1	X92689		-				- 3	
galactosamine:polypeptide				-					
acetylgalactosaminyltransf erase 3						. (	ŀ		
(GalNAc-T3) (GALNT3) (non-exact 65%)									•
unactive progesterone receptor, 23 Kd (P23)	2	L24804		+	+	+		+	
unconventional myosin-ID , (MYO1F)	3	U57053							
uncoupling protein homolog (UCPH)	1	U94592							
uncoupling protein homolog (UCPH) (low match 67%)	. <b>1</b>	U94592							5.0
Unknown gene product	1	AC002310							
unknown mRNA (clone 24514)	. 1.	AF070542						0	
unknown protein (clone ICRFp507L0677)	2	Z70223							
unknown protein (Hs.93832)	1	AF070626	+	+	+	+	.+	+	
unknown protein IT14	1	AF040966			·				
uppressor of Ty (S.cerevisiae) 6 homolog	1	D79984	+	+ ,	+	+	+	+	
upregulated by 1,25- dihydroxyvitamin D-3 (VDUP1)	74	S73591	+	+	+	+		+	high in heart
upregulated by 1,25- dihydroxyvitamin D-3 (VDUP1) (low match)	- <b>1</b>	S73591							
upregulated by 1,25- dihydroxyvitamin D-3 (VDUP1) (low match)	. 1	S73591							
upregulated by 1,25- dihydroxyvitamin D-3 (VDUP1) (low score)	1	S73591			• •				
upstream binding factor (hUBF)	. 1	X53461	+	+		+		+	
UV radiation resistance associated gene (UVRAG)	2	X99050	y.	+	.+:	+		+	
vacuolar proton-ATPase, subunit D; V-ATPase, subunit D (ATP6DV)	4	X71490	0	+	+	+	+	*	·
v-akt murine thymoma viral oncogene homolog 1 (AKT1)	1	M63167	+	. +	+	+		+	
Vanin 2 (VNN2)	3	AJ132100		1.					
vasodilator-stimulated phosphoprotein (VASP)	3	Z46389	+ .		+	+		+	
vav 1 oncogene (VAV1)	1	M59834						+	
vav 2 oncogene (VAV2)	1	S76992	+	+					
v-crk avian sarcoma virus CT10 oncogene homolog (CRK)	1	D10656	W	+	+		+		·
v-erb-b2 avian erythroblastic leukemia viral oncogene homolog 3 (ERBB3)	1	M29366			1		·	+.	
VERSICAN CORE	1	P13611	T						
PROTEIN PRECURSOR	-		1	1 1			1	1	

WO 00/40749								rç	.1/CAUU/00005
vesicle-associated membrane protein 3 (cellubrevin) (VAMP3)	1	U6452 <b>0</b>	•						
v-los FBJ murine osteosarcoma viral oncogene homolog (FOS)	26	K00650	*	+	+	+	+	+	high in aorta
v-fos FBJ murine osteosarcoma viral oncogene homolog (FOS)	1	K00650							*
(low match) villin 2 (ezrin) (VIL2)	1	X51521	+		+			+	·
villin-like protein	1	D88154						<del>                                     </del>	
	12	X56134		+	+	+	+	+	high in many libraries
vimentin (VIM)							_		riigii iii marry iibraries
vinculin (VCL)	4	M33308	·	+	+	+		+	
vitamin A řesponsivě; cytoskeleton related (JWA)	6	AF.070523		+	+	+		14.	
v-jun avian sarcoma virus 17 oncogene homolog (JUN)	2	U65928	+	+	+	+		+	
v-myb avian myeloblastosis viral oncogene homolog (MYB)	1	M15024			+		+*		(1)
voltage-dependent anion channel 1 (VDAC1)	. 1	L06132	+.	.+	. +	+		+	
voltage-dependent anion channel 3 (VDAC3)	4	U90943	-	+	+	.+		+	
von Hippel-Lindau syndrome (VHL)	. 1	L15409		+	+	,+		.+	
von Willebrand factor (vWF) (low matched) v-raf murine sarcoma 3611	1	X06828		+	+	+			
viral oncogene homolog 1 (ARAF1)	. 2		•	. *		•			
v-raf-1 murine leukemia viral oncogene homolog 1 (RAF1)	1	X03484	+	+	+	+		+	
v-ral simian leukemia viral oncogene homolog B (ras related; GTP binding protein) (RALB)	3 .	M35416							
V-rel avian reticuloendotheliosis viral oncogene homolog A (nuclear factor of kappa light polypeptide gene enhancer in B-cells 3		L19067		+	+	+		+	
(p65)) (RELA) v-yes-1 Yamaguchi sarcoma viral related	2	M16038	+	+		+		+	
oncogene homolog (LYN) WD repeat domain 1	1	AB010427	+	+	+	+	+	+	
(WDR1) WDR1 (=AF020260)	1	AF020056						<u> </u>	
WD-repeat protein	2	U94747		+	+	-	-	+	
(HAN11) Williams-Beuren syndrome chromosome region 1	12	AF045555	+	+	+	+	+	+-	
(WBSCR1) Wiskott-Aldrich syndrome protein interacting protein (WASPIP)	4	X86019	+, -	+	+			+	
X (inactive)-specific transcript (XIST)	2 .	M97168					-		
xeroderma pigmentosum, complementation group C (XPC)	3	D21089	+	+	+	+			
XIAP associated factor-1	2	X99699				+			· ·
XIB	1	X90392	<del></del>	+	+	<del>                                     </del>	+	+	<del> </del>
X-linked anhidroitic ectodermal dysplasia	<del>- i</del>	AF003528							

W O 00/40/49			•					_ •	
X-ray repair	1	M30938	+	+	.+	+		+	high in spleen
complementing defective		•					i	١.	
repair in Chinese hamster	. 1					1		Ė	
cells 5 (double-strand-	-X-				l	ł			•
break rejoining; Ku autoantigen,	٠.		· ·	l	ŀ	ŀ			
(80kD) (XRCC5)		•	٠.					l	
XRP2 protein	1	AJ007590		-	<del> </del>	├—		ļ. —	-
									*
yeloid differentiation	. 1	U84408		+	+	+		+	
primary response gene					·			l	1
(88) (MYD88)									
zeta-chain (TCR)	1	L05148.	+			+			
associated protein kinase			'	l	1				
(70kD) (ZAP70)				L		<u> </u>	L		* * *
zeta-chain (TCR)	1	L05148							
associated protein kinase						1	١.		
(70kD) (ZAP70) (low	].					l		ľ	
match)	<u> </u>		<u> </u>			ļ			
zinc finger protein	. 2	U69274	+	+	+	+		+	. *
(Hs.47371)									
zinc finger protein	1	U69645	+	+	+	+	7	+	
(Hs.78765)			<u> </u>	<u>L</u>	<u>L</u>	<u>L</u>	<u> </u>	<u>L</u>	
zinc finger protein 10 (KOX	.1	X78933							+ only
1) (ZNF10)				l					
ZINC FINGER PROTEIN	1	Q15973					*		
124 (HZF-16) (non-exact			I	1		1	1		
51%)		·	L			<u></u>	L	<u>L_</u>	<u> </u>
zinc finger protein 124	1	554641	1.						
(HZF-16) (ZNF124) (non-					١.	1	1	1	
exact, 78%)				ł	'	1		ļ	
ZINC FINGER PROTEIN	1	P52736							
133		·	·	į			1		1.
zinc finger protein 136	. 1	U09367		1	+	+			
(clone pHZ-20) (ZNF136)		•	.**					l	
zinc finger protein 140	-1	U09368		+		+		+	
(clone pHZ-39) (ZNF140)		•						1	·
zinc finger protein 140	1	AF060865					<u> </u>		
(clone pHZ-39) (ZNF140)								l	]
(non-exact 59%)									[ '
zinc finger protein 140	1	U09368		<del> </del> -	-	<b>†</b>			
(clone pHZ-39) (ZNF140)		•		ļ	1	ŀ			<b>!</b> •
(non-exact 73%)					i				
zinc finger protein 140	1	S66508		<b>-</b>		<u> </u>			
(clone pHZ-39) (ZNF140)			' '	١.	l	1		l	1
(non-exact 73%aa)					}	<b>.</b> .			
zinc finger protein 140	.1	U09368					_		
(clone pHZ-39) (ZNF140)					1				}
(non-exact, 80%)							1		
zinc finger protein 143	2	U09850	+	+	+	+	+	+	· · · · · · · · · · · · · · · · · · ·
(clone pHZ-1) (ZNF143)	_		• \						1
zinc finger protein 143	1	U09850		<del> </del>	<del></del>	<del>                                     </del>	Ι	<del>                                     </del>	
(clone pHZ-1) (ZNF143)	,		ł			.		I	
(low match)	·	•	1		ŀ	1			1
zinc finger protein 148		AF039019	. +	<del>                                     </del>	<del>                                     </del>	<del>                                     </del>	$\vdash$	<del>                                     </del>	
(pHZ-52) (ZNF148)	·			1		1			
ZINC FINGER PROTEIN	1	Q13105	<del>                                     </del>	<del> </del>	_	$\vdash$	$\vdash$	$\vdash$	<del>                                     </del>
151 (MIZ-1 PROTEIN) (low	' '			1	٠.	ļ.		l	l .
match)			·			i			1
zinc finger protein 173		U09825	B, T	+	+	<del> </del>	+	<del>-</del>	
(ZNF173)	'	000020	5, '	'	· ·		l .	1	1 -
zinc finger protein 192	1	U57796	<del> </del>	<del>                                     </del>	<del>                                     </del>	├			
(ZNF192) (non-exact, 66%)	• 9	001130		1				1	1
zinc finger protein 198		AJ224901	ļ	+	+	+	ŀ		<del>                                       </del>
(ZNF198)	'	7WZZ48U I	1	•	*	ļ. <sup>*</sup>		1	
	<b></b> -	VED4ED	ļ			├—	<u> </u>		
zinc finger protein 2 (ZNF2)	1	X60152				1	1	1 3	
(low match)		* PERRENA	ļ	<u> </u>		<u> </u>	<u> </u>		·
zinc finger protein 200	1	AF060866	:	+		+			
(ZNF200)						<u> </u>			<u></u>
zinc finger protein 207	- 6	AF046001	+	+	+	+	+	+	high in prostate
(ZNF207)				<u> </u>					· · · · · · · · · · · · · · · · · · ·
zinc finger protein 216	2	AF062072	+ .	+	+	+		+	1
(ZNF216)	·		<u> </u>	<u> </u>	<u> </u>	L	L	L	·

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zinc finger protein 217 (ZNF217)	1	AF041259	Tactiv	ated				+	
ZINC FINGER PROTEIN	1	P17026							
22 (ZINC FINGER									·
PROTEIN KOX15) (non- lexact 58%)									
zinc finger protein 230		U95044	<del>}</del>	+		$\vdash$			
(ZNF230)	<u>'</u>	033044.							·
Zinc finger protein 239	1	L26914		+		+			
(ANF239)									
zinc finger protein 261 (ZNF261)	1	AB002383		+-	+	+		+	
zinc finger protein 262	1	AB007885		+	+	+		+ ·	
(ANF262)									T
zinc finger protein 263	1	. D88827					N 6		
(ZNF263) zinc finger protein 264	1	1 AB007872	<del>}</del>	+	+	+		11	
(ZNF264)		AB007872		•	, T	*			
ZINC FINGER PROTEIN	1	Q06730	· · · · · ·						
33A (ZINC FINGER			*						٠ .
PROTEIN KOX31)								ŀ	·
(KIAA0065) (HA0946) zinc finger protein 42	1	M58297	+	+	+	+	<del>-</del>	+	
(myeloid-specific retinoic				·				i	
cid- responsive) (ZNF42)				<u> </u>	<u>.</u>				
zinc finger protein 43 (HTF6) (ZNF43) (low	1	X59244						·	
match)	:								
zinc finger protein 43	. 1	X59244	İ		_				
(HTF6) (ZNF43) (non-								İ	
exact, 54%)		X59244						<u> </u>	<u> </u>
zinc finger protein 43 (HTF6) (ZNF43) (non-	1.	. ^39244							· .
exact, 71%)		·					101	-	,
ZINC FINGER PROTEIN	1	P28160							
43 (ZINC PROTEIN HTF6) (non-exact 67%)						ŀ			
zinc finger protein 45 (a	1	L75847			<del> </del>	┢	-		only found in testis
Kruppel-associated box									
(KRAB) domain		•	1					ŀ	
polypeptide) (ZNF45) ZINC FINGER PROTEIN	1	P24278		-			-	<u> </u>	
46 (ZINC FINGER	'		1					l	
PROTEIN KUP) (non-exact									
		•	<u> </u>			_			
62%)	<u> </u>			+	+	+		+	1
62%) zinc finger protein 6	1	X56465		'		l			l ·
62%)   zinc finger protein 6   (CMPX1) (ZNF6)	1					_	_	_	
62%) zinc finger protein 6 (CMPX1) (ZNF6) zinc finger protein 74 (Cos52) (ZNF74) (non-	1	X56465 X71623							
62%) zinc finger protein 6 (CMPX1) (ZNF6) zinc finger protein 74 (Cos52) (ZNF74) (non- exact, 67%)		X71623							
62%) zinc finger protein 6 (CMPX1) (ZNF6) zinc finger protein 74 (Cos52) (ZNF74) (non-exact, 67%) zinc finger protein 76	1			+	+	+		+	
62%) zinc finger protein 6 (CMPX1) (ZNF6) zinc finger protein 74 (Cos52) (ZNF74) (non-exact, 67%) zinc finger protein 76 (expressed in testis)		X71623			+	+			
62%) zinc finger protein 6 (CMPX1) (ZNF6) zinc finger protein 74 (Cos52) (ZNF74) (non- exact, 67%) zinc finger protein 76 (expressed in testis) (ZNF76) ZINC FINGER PROTEIN		X71623			+	+			
62%) zinc finger protein 6 (CMPX1) (ZNF6) zinc finger protein 74 (Cos52) (ZNF74) (non- exact, 67%) zinc finger protein 76 (expressed in testis) (ZNF76) ZINC FINGER PROTEIN 83 (ZINC FINGER	1	X71623 M91592			+	+			
62%) zinc finger protein 6 (CMPX1) (ZNF6) zinc finger protein 74 (Cos52) (ZNF74) (non- exact, 67%) zinc finger protein 76 (expressed in testis) (ZNF76) ZINC FINGER PROTEIN 83 (ZINC FINGER PROTEIN HPF1) (non-	1	X71623 M91592			+	+			
62%) zinc finger protein 6 (CMPX1) (ZNF6) zinc finger protein 74 (Cos52) (ZNF74) (non-exact, 67%) zinc finger protein 76 (expressed in testis) (ZNF76) ZINC FINGER PROTEIN 83 (ZINC FINGER PROTEIN HPF1) (non-exact 65%)	1	X71623 M91592 P51522	Tactivated		+	+			
62%) zinc finger protein 6 (CMPX1) (ZNF6) zinc finger protein 74 (Cos52) (ZNF74) (non- exact, 67%) zinc finger protein 76 (expressed in testis) (ZNF76) ZINC FINGER PROTEIN 83 (ZINC FINGER PROTEIN HPF1) (non- exact 65%) zinc finger protein 84 (HPF2) (ZNF84)	1	X71623 M91592	T activated	+		+		+	
62%) zinc finger protein 6 (CMPX1) (ZNF6) zinc finger protein 74 (Cos52) (ZNF74) (non- exact, 67%) zinc finger protein 76 (expressed in testis) (ZNF76) ZINC FINGER PROTEIN 83 (ZINC FINGER PROTEIN HPF1) (non- exact 65%) zinc finger protein 84 (HPF2) (ZNF84) zinc finger protein 85	1	X71623 M91592 P51522	T activated	+		+		+	
62%) zinc finger protein 6 (CMPX1) (ZNF6) zinc finger protein 74 (Cos52) (ZNF74) (non-exact, 67%) zinc finger protein 76 (expressed in testis) (ZNF76) ZINC FINGER PROTEIN 83 (ZINC FINGER PROTEIN HPF1) (non-exact 65%) zinc finger protein 84 (HPF2) (ZNF84) zinc finger protein 85 (ZNF85))	1 1 2	X71623 M91592 P51522 M27878 U35376	T activated	+	+	+		+	
62%) zinc finger protein 6 (CMPX1) (ZNF6) zinc finger protein 74 (Cos52) (ZNF74) (non- exact, 67%) zinc finger protein 76 (expressed in testis) (ZNF76) ZINC FINGER PROTEIN 83 (ZINC FINGER PROTEIN HPF1) (non- exact 65%) zinc finger protein 84 (HPF2) (ZNF84) zinc finger protein 85 (ZNF85)) zinc finger protein 9 (ZNF9)	1 1 2 5	M91592 P51522 M27878 U35376 M28372	T activated	+	+		-	+	
62%) zinc finger protein 6 (CMPX1) (ZNF6) zinc finger protein 74 (Cos52) (ZNF74) (non-exact, 67%) zinc finger protein 76 (expressed in testis) (ZNF76) ZINC FINGER PROTEIN 83 (ZINC FINGER PROTEIN HPF1) (non-exact 65%) zinc finger protein 84 (HPF2) (ZNF84) zinc finger protein 85 (ZNF85)) zinc finger protein 9 (ZNF9) ZINC FINGER PROTEIN	1 1 2	X71623 M91592 P51522 M27878 U35376	Tactivated	+	+	+	+	+	
62%) zinc finger protein 6 (CMPX1) (ZNF6) zinc finger protein 74 (Cos52) (ZNF74) (non- exact, 67%) zinc finger protein 76 (expressed in testis) (ZNF76) ZINC FINGER PROTEIN 83 (ZINC FINGER PROTEIN HPF1) (non- exact 65%) zinc finger protein 84 (HPF2) (ZNF84) zinc finger protein 85 (ZNF85)) zinc finger protein 9 (ZNF9) ZINC FINGER PROTEIN 93 (=ZINC FINGER	1 1 2 5	M91592 P51522 M27878 U35376 M28372	Tactivated	+	+	+	+	+	
62%) zinc finger protein 6 (CMPX1) (ZNF6) zinc finger protein 74 (Cos52) (ZNF74) (non-exact, 67%) zinc finger protein 76 (expressed in testis) (ZNF76) ZINC FINGER PROTEIN 83 (ZINC FINGER PROTEIN 83 (ZINC FINGER PROTEIN 83 (ZINC FINGER) zinc finger protein 84 (HPF2) (ZNF84) zinc finger protein 85 (ZNF85)) zinc finger protein 9 (ZNF9) ZINC FINGER PROTEIN 93 (=ZINC FINGER PROTEIN 93 (=ZINC FINGER PROTEIN HTF34) (non-exact 70%)	1 1 2 5 1	M91592 P51522 M27878 U35376 M28372	Tactivated	+	+	+	+	+	
62%) zinc finger protein 6 (CMPX1) (ZNF6) zinc finger protein 74 (Cos52) (ZNF74) (non- exact, 67%) zinc finger protein 76 (expressed in testis) (ZNF76) ZINC FINGER PROTEIN 83 (ZINC FINGER PROTEIN HPF1) (non- exact 65%) zinc finger protein 84 (HPF2) (ZNF84) zinc finger protein 85 (ZNF85)) zinc finger protein 9 (ZNF9) ZINC FINGER PROTEIN 93 (=ZINC FINGER PROTEIN HTF34) (non- exact 70%) zinc finger protein C2H2-25	1 1 2 5 1	M91592 P51522 M27878 U35376 M28372	Tactivated	+	+	+	+	+	
62%) zinc finger protein 6 (CMPX1) (ZNF6) zinc finger protein 74 (Cos52) (ZNF74) (non- exact, 67%) zinc finger protein 76 (expressed in testis) (ZNF76) ZINC FINGER PROTEIN 83 (ZINC FINGER PROTEIN HPF1) (non- exact 65%) zinc finger protein 84 (HPF2) (ZNF84) zinc finger protein 85 (ZNF85)) zinc finger protein 9 (ZNF9) ZINC FINGER PROTEIN 93 (=ZINC FINGER PROTEIN HTF34) (non- exact 70%) zinc finger protein C2H2-25 (ZNF25)	1 1 2 5 1	M91592 P51522 M27878 U35376 M28372 P35789 U38904	Tactivated	+ + +	+ + +	+	+	+	
62%) zinc finger protein 6 (CMPX1) (ZNF6) zinc finger protein 74 (Cos52) (ZNF74) (non-exact, 67%) zinc finger protein 76 (expressed in testis) (ZNF76) ZINC FINGER PROTEIN 83 (ZINC FINGER PROTEIN HPF1) (non-exact 65%) zinc finger protein 84 (HPF2) (ZNF84) zinc finger protein 85 (ZNF85)) zinc finger protein 9 (ZNF9) ZINC FINGER PROTEIN 93 (=ZINC FINGER PROTEIN HTF34) (non-exact 70%) zinc finger protein C2H2-25 (ZNF25) zinc finger protein clone	1 1 2 5 1	X71623 M91592 P51522 M27878 U35376 M28372 P35789	Tactivated	+ + +	+ + +	+	+	+	
62%) zinc finger protein 6 (CMPX1) (ZNF6) zinc finger protein 74 (Cos52) (ZNF74) (non- exact, 67%) zinc finger protein 76 (expressed in testis) (ZNF76) ZINC FINGER PROTEIN 83 (ZINC FINGER PROTEIN HPF1) (non- exact 65%) zinc finger protein 84 (HPF2) (ZNF84) zinc finger protein 85 (ZNF85)) zinc finger protein 9 (ZNF9) ZINC FINGER PROTEIN 93 (=ZINC FINGER PROTEIN HTF34) (non- exact 70%) zinc finger protein C2H2-25 (ZNF25) zinc finger protein clone L3-4 zinc finger protein	1 1 2 5 1	M91592 P51522 M27878 U35376 M28372 P35789 U38904	T activated	+ + +	+ + +	+	+	+	blood only
62%) zinc finger protein 6 (CMPX1) (ZNF6) zinc finger protein 74 (Cos52) (ZNF74) (non-exact, 67%) zinc finger protein 76 (expressed in testis) (ZNF76) ZINC FINGER PROTEIN 83 (ZINC FINGER PROTEIN HPF1) (non-exact 65%) zinc finger protein 84 (HPF2) (ZNF84) zinc finger protein 85 (ZNF85)) zinc finger protein 9 (ZNF9) ZINC FINGER PROTEIN 93 (=ZINC FINGER PROTEIN HTF34) (non-exact 70%) zinc finger protein C2H2-25 (ZNF25) zinc finger protein C2H2-25 inc finger protein Cone L3-4	1 1 2 5 1	M91592 P51522 M27878 U35376 M28372 P35789 U38904 AF024706		+ + +	+ + +	+	+	+	blood only

ZINC FINGER PROTEIN HRX (ALL-1) (71%a.a.)	1	Q03164										
zinc finger protein HZF4	1	X78927										
zinc finger protein RIZ	1	D45132	· +	+	+	+		+				
zinc finger protein, subfamily 1A, 1 (Ikaros) (LYF1)	1	U40462	<b>+</b>						÷			
zinc finger protein, subfamily 1A, 1 (Ikaros) (LYF1) (low match)	1	. U40462										•
zinc finger transcriptional regulator (GOS24)	1	M92844								-		
zinc-finger helicase (hZFH)	2	U91543	+	T +	+	+		+			-	
Zn-15 related zinc finger protein (rff)	1	U22377		+	+	+			•			
Zn-15 related zinc finger protein (rif) (non-exact 56%)	. 1 :	U22377										
ZNF80-linked ERV9 long terminal repeat	1	X83497					,			•		
ZW10 (Drosophila) homolog, centromere/kinetochore protein (ZW10)	2	U54996		+								
zyxin (ZYX)	4	X95735			·							

Column 1: List of unique genes derived from 6,283 known ESTs from blood cells.

Column 2: Number of genes found in randomly sequenced ESTs from blood cells.

Column 3: Accession number. Column 4: "+" indicates the presence of the unique gene in publicly available cDNA libraries of blood (Bl), brain (Br), heart (H), kidney (K), liver (Li) and lung (Lu). \*\*Comparison to previously identified tissue-specific genes was determined using the GenBank of the National Centre of Biotechnology Information (NCBI) Database.

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## Discussion

Every cell and tissue comprising the human body share the necessary genetic information required to maintain cellular homeostasis. These "housekeeping" genes function in basic cellular maintenance, including energy metabolism and cellular structure in all cell types. However, in certain situations, even the housekeeping genes show altered expression. Thus, it is necessary to define the use of these genes as internal controls from one investigation to another. Current results from the human blood cell EST database indicate that over 50% of the transcripts are

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widely expressed throughout the human body. Most of the cell or tissue specific genes are also detectable in blood cells by RT-PCR analysis.

For example, isoformic myosin heavy chain genes are known to be generally expressed in cardiac muscle tissue. In the rodent, the βMyHC gene is only highly expressed in the fetus and in diseased states such as overt cardiac hypertrophy, heart failure and diabetes; the αMyHC gene is highly expressed shortly after birth and continues to be expressed in the adult heart. In the human, however, βMyHC is highly expressed in the ventricles from the fetal stage through adulthood. This highly expressed βMyHC, which harbours several mutations, has been demonstrated to be involved in familial hypertrophic cardiomyopathy (Geisterfer-Lowrance *et al.* 1990). It was reported that mutations of βMyHC can be detected by PCR using blood lymphocyte DNA (Ferrie et al., 1992). Most recently, it was also demonstrated that mutations of the myosin-binding protein C in familial hypertrophic cardiomyopathy can be detected in the DNA extracted from lymphocytes (Niimura *et al.*, 1998).

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Similarly, APP and APC, which are known to be tissue specific and predominantly expressed in the brain and intestinal tract, are also detectable in the transcripts of blood. These cell- or tissue-specific transcripts are not detectable by Northern blot analysis. However, the low number of transcript copies can be detected by RT-PCR analysis. These findings strongly demonstrate that genes preferentially expressed in specific tissues can be detected by a highly sensitive RT-PCR assay. In recent years, evidence has been obtained to indicate that expression of cell or tissue-restricted genes can be detected in the peripheral blood of patients with metastatic transitional cell carcinoma (Yuasa et al. 1998) and patients with prostate cancer (Gala et al. 1998).

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Atrial natriuretic factor (ANF) and zinc finger protein (ZFP), which are known to be highly expressed in heart tissue biopsies and in the plasma of heart failure patients, are also detectable in the transcripts of blood. Differential expression of zinc finger protein among the normal, diabetic and asymptomatic preclinical

subjects may have additional value as a prophylactic "early warning system". On a related note, there is now more attention/discussion in the cardiovascular disease field being focused on Syndrome X, loosely defined as a continuum of hypertension, increasing sugar levels, diabetes, kidney failure, culminating in heart failure, with the possibility of stroke and heart attack at any time in the continuum. The early identification of patients at risk of organ failure has been a challenge to the medical community for some time and the present method has the potential of resolving or, at least, ameliorating this challenge.

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The present invention demonstrates that a simple drop of blood may be used to determine the quantitative expression of various mRNAs that reflect the health/disease state of the subject through the use of RT-PCR analysis. This entire process takes about three hours or less. The single drop of blood may also be used for multiple RT-PCR analyses. There is no need for large samples and/or costly and time-consuming separation of cell types within the blood for this method as compared to the methods described by Kimoto (1998) and Chelly et al. (1989; 1988). It is believed that the present finding can potentially revolutionize the way that diseases are detected, diagnosed and monitored because it provides a non-invasive, simple, highly sensitive and quick screening for tissue-specific transcripts. The transcripts detected in whole blood have potential as prognostic or diagnostic markers of disease, as they reflect disturbances in homeostasis in the human body. Delineation of the sequences and/or quantitation of the expression levels of these marker genes by RT-PCR will allow for an immediate and accurate diagnostic/prognostic test for disease or to assess the efficacy and monitor a particular therapeutic.

In addition to RT-PCR, other methods of amplifying may also be used for the purpose of measuring/quantitating tissue-specific transcripts in human blood. For example, mass spectrometry may be used to quantify the transcripts (Koster et al., 1996; Fu et al., 1998). The application of presently disclosed method for detecting tissue-specific transcripts in blood does not restrict to subjects undergoing course of

therapy or treatment, it may also be used for monitoring a patient for the onset of overt symptoms of a disease. Furthermore, the present method may be used for detecting any gene transcripts in blood. A kit for diagnosing, prognosing or even predicting a disease may be designed using gene-specific primers or probes derived from a whole blood sample for a specific disease and applied directly to a drop of blood. A cDNA library specific for a disease may be generated from whole blood

The following references were cited herein:

Claudio JO et al. (1998). Genomics 50:44-52.

10 Chelly J et al. (1989). Proc. Nat. Acad. Sci. USA. 86:2617-2621.

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Drews J & Ryser S (1997). Nature Biotech. 15:1318-9.

Ferrie RM et al. (1992). Am. J. Hum. Genet. 51:251-62.

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15 Gala JL et al. (1998). Clin. Chem. 44(3):472-81.

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Groden J et al. (1991). Cell 66:589-600.

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20 Jin O et al. (1990). Circulation 82:8-16

Kimoto Y (1998). Mol. Gen. Genet 258:233-239.

Koster M et al. (1996). Nat. Biotech 14: 1123-8.

Liew & Jandreski (1986). Proc. Nat. Acad. Sci. USA. 83:3175-3179

Liew CC et al. (1990). Nucleic Acids Res. 18:3647-3651.

25 Liew CC (1993). J Mol. Cell. Cardiol. 25:891-894

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Liew et al. (1997). Mol. and Cell. Biochem. 172:81-87.

Niimura H et al. (1998). New Eng. J. Med. 338:1248-1257.

Ogawa M (1993). Blood 81:2844-2853.

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Santoro IM & Groden J (1997). Cancer Res. 57:488-494.

Yuasa T et al. (1998). Japanese J. Cancer Res. 89:879-882.

Any patents or publications mentioned in this specification are indicative of the levels of those skilled in the art to which the invention pertains. Further, these patents and publications are incorporated by reference herein in their entirety to the same extent as if each individual publication was specifically and individually indicated to be incorporated by reference.

One skilled in the art will appreciate readily that the present invention is well adapted to carry out the objects and obtain the ends and advantages mentioned, as well as those objects, ends and advantages inherent herein. The present examples, along with the methods, procedures, treatments, molecules, and specific compounds described herein are presently representative of preferred embodiments, are exemplary, and are not intended as limitations on the scope of the invention. Changes therein and other uses will occur to those skilled in the art which are encompassed within the spirit of the invention as defined by the scope of the claims.

## WO 00/40749 WHAT IS CLAIMED IS:

- 1. A method for detecting expression of a gene in blood from a subject, comprising the steps of:
  - a) quantifying RNA from a subject blood sample; and
- b) detecting expression of said gene in the quantified RNA, wherein the expression of said gene in said quantified RNA indicates expression of said gene in the subject blood.
- 10 2. The method of claim 1, wherein the quantification is performed by mass spectrometry.
  - 3. A method for detecting expression of one or more genes in blood from a subject, comprising the steps of:
- a) obtaining a subject blood sample;
  - b) extracting RNA from said blood sample;
  - c) amplifying said RNA;
  - d) generating expressed sequence tags from the amplified RNA product; and
- e) detecting expression of said genes in the expressed sequence tags, wherein the expression of said genes in said expressed sequence tags indicates expression of said genes in the subject blood.
- 4. The method of claim 3, wherein said genes are non-cancer-25 associated genes.
  - 5. The method of claim 3, wherein said genes are tissue-specific genes.

		6. The	method	of	claim	3,	wherein	said	subject	is	a	fetus,	an
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embryo,	a chile	d, an adult o	r a non-h	um	an anii	nal							

- 7. The method of claim 3, wherein the amplification is performed by RT-PCR.
- 8. The method of claim 7, wherein said RT-PCR utilizes primers selected from the group consisting of random sequence primers and gene-specific primers.
  - 9. A method for detecting expression of one or more genes in blood from a subject, comprising the steps of:
    - a) obtaining a subject blood sample;
    - b) extracting DNA fragment(s) from said blood sample;
    - c) amplifying said DNA fragment(s); and
  - d) detecting expression of said genes in the amplified DNA product, wherein the expression of said genes in said amplified DNA product indicates expression of said genes in the subject blood.

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- 10. A method for monitoring a course of therapeutic treatment in an individual, comprising the steps of:
  - a) obtaining a blood sample from said individual;
  - b) extracting RNA from said blood sample;

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- c) amplifying said RNA;
- d) generating expressed sequence tags from the amplified RNA product; and

e) detecting expression of genes in said expressed sequence tags, wherein the expression of said genes is associated with the effect of said therapeutic treatment; and

- f) repeating steps a)-e), wherein the course of said therapeutic treatment is monitored by detecting the change of expression of said genes in the expressed sequence tags.
  - 11. The method of claim 10, wherein the amplification is performed by RT-PCR.

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- 12. The method of claim 11, wherein the change of expression of said genes in the expressed sequence tags is monitored by sequencing the expressed sequence tags and comparing the resulting sequences at various time points.
- 13. The method of claim 11, wherein the change of expression of said genes in the expressed sequence tags is monitored by performing single nucleotide polymorphism analysis and detecting the variation of a single nucleotide in the expressed sequence tags at various time points.
- 20 14. The method of claim 10, wherein said individual is monitored for the onset of overt symptoms of a disease, and wherein the expression of said genes is associated with the onset of said symptoms.
- 15. A method for diagnosing a disease in a test subject, comprising
  25 the steps of:
  - a) generating a cDNA library for said disease from a whole blood sample from a normal subject;

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- b) generating expressed sequence tag (EST) profile from the normal subject cDNA library;
- c) generating a cDNA library for said disease from a whole blood sample from a test subject;
  - d) generating EST profile from the test subject cDNA library; and
- e) comparing the test subject EST profile to the normal subject EST profile, wherein if said test subject EST profile differs from said normal subject EST profile, said test subject might be diagnosed with said disease.
- 16. A kit for diagnosing, prognosing or predicting a disease, comprising:
- a) gene-specific primers; wherein said primers are designed in such a way that the sequences of said primers contain the opposing ends of two adjacent exons for the specific gene with the intron sequence excluded; and
  - b) a carrier, wherein said carrier immobilizes said primer(s).
- 17. The kit of claim 16, wherein said gene-specific primer(s) are selected from the group consisting of insulin-specific primers, atrial natriuretic factor-specific primers, zinc finger protein gene-specific primers, beta-myosin heavy chain gene-specific primers, amyloid precurser protein gene-specific primers, and adenomatous polyposis-coli protein gene-specific primers.
- 18. The kit of claim 17, wherein the sequences of said genespecific primers are selected from the group consisting of SEQ ID Nos. 1 and 2, and SEQ ID Nos. 5 and 6.
- 19. A method for diagnosing, prognosing or predicting a disease in a test subject, comprising the step of:

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applying the kit of claim 16 to a test subject whole blood sample, wherein quantitative expression levels of specific genes associated with said disease are detected and compared to the levels of said specific genes expressed in a normal subject, therefore, said disease may be diagnosed, prognosed or predicted.

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20. The method of claim 19, wherein said method is used for monitoring a course of therapeutic treatment or monitoring the onset of overt symptoms of said disease.

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comprising:

21. A kit for diagnosing, prognosing or predicting a disease,

a) probes derived from a whole blood sample for a specific disease; and

b) a carrier, wherein said carrier immobilizes said probes.

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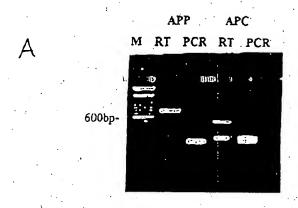
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22. A method for diagnosing, prognosing or predicting a disease in a test subject, comprising the step of:

applying the kit of claim 21 to a test subject whole blood sample, wherein quantitative expression levels of specific genes associated with said disease are detected and compared to the levels of said specific genes expressed in a normal subject, therefore, said disease may be diagnosed, prognosed or predicted.

- 23. The method of claim 22, wherein said method is used for monitoring a course of therapeutic treatment or monitoring the onset of overt symptoms of said disease.
- 24. A cDNA library specific for a disease, wherein said cDNA library is generated from whole blood samples.



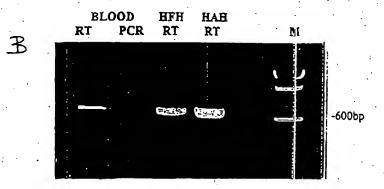
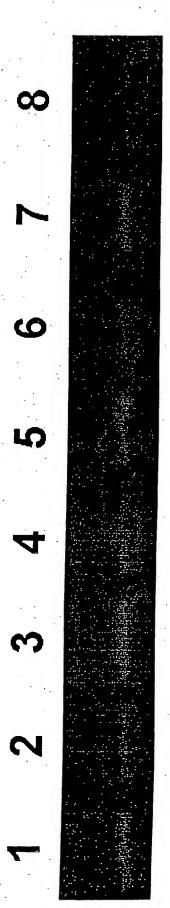


FIGURE 1 1/7

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FIGURE 2

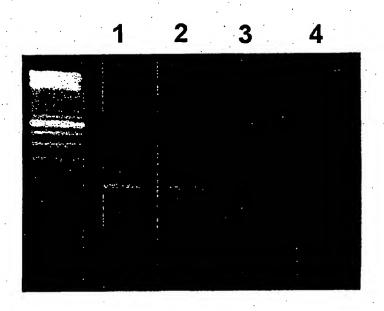
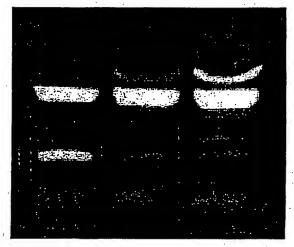


FIGURE 3 3/7 WO 00/40749 PCT/CA00/00005

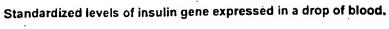
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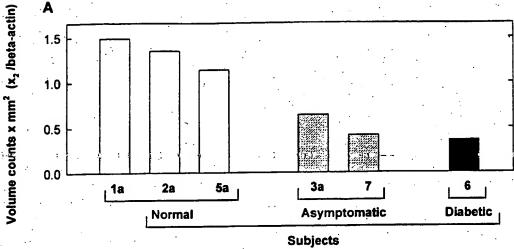


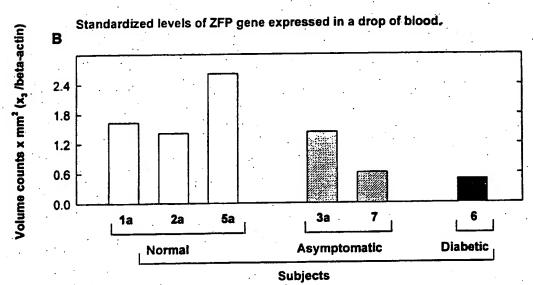
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INS

FIGURE 4 4/7







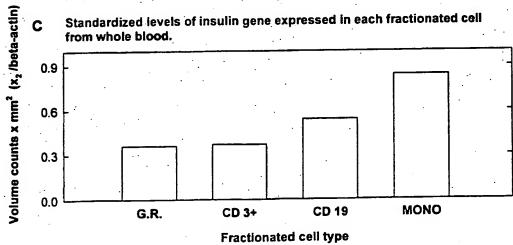
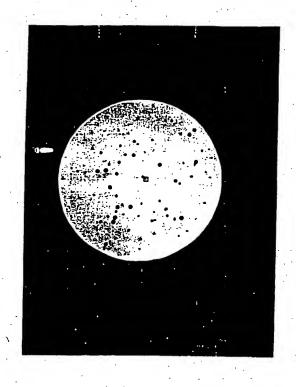
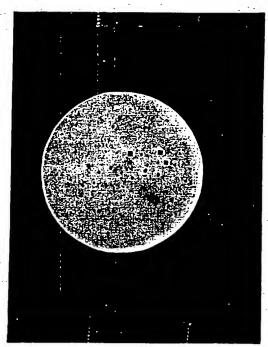


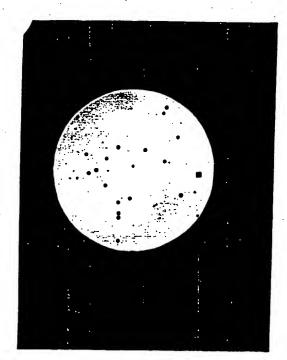
FIGURE 5

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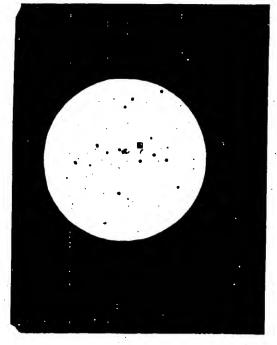


FIGURE 6 6/7

Total: 13,283 ESTs Known: 6,283 Mitochondrial: 405 Ribosome: 498 Repeat: 868 Mis.: 156

Novel: 2,718

## Human Blood



Human Fetal Heart

■Cell Signalling/Communication □ Cell/organism defense □ Cell structure/Motility

**■**5% ■8%

**■**22%

%9□

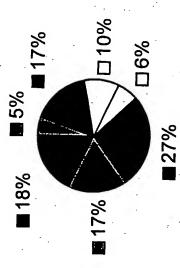
Gene/Protein expression ■ Metabolism

%9 •

■Unclassified

□26%

**29%** 



### FIGURE 7

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7/7

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Inter Inal Application No PCT/CA 00/00005

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 C12Q1/68

According to International Patent Classification (IPC) or to both national classification and IPC

#### B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, MEDLINE, CHEM ABS Data, BIOSIS, EMBASE, EMBL

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′	the whole document		17-20
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filing d L* docume which citation O* docume	ate  In which may throw doubts on priority claim(s) or  is cited to establish the publication date of another  n or other special reason (as specified)  ent referring to an oral disclosure, use, exhibition or	"X" document of particular relevance; cannot be considered novel or ca involve an inventive step when the "Y" document of particular relevance; cannot be considered to involve a document is combined with one of the considered with	mot be considered to e document is taken alone the claimed invention an inventive step when the or more other such docu-
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Date of the	actual completion of the international search	∵ate of mailing of the internations	Il search report .
2	7 June 2000	12/07/2000	
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